Volume 151 January-June 1977

NATIONAL GEOGRAPHIC

INDEX

January-June 1977

VOLUME 151

PUBLISHED BY THE
NATIONAL GEOGRAPHIC SOCIETY
WASHINGTON, D. C.

UMI

NATIONAL GEOGRAPHIC SOCIETY

WASHINGTON, D. C.

Organized "for the increase and diffusion of geographic knowledge"

GILBERT HOVEY GROSVENOR
Editor, 1899-1954; President, 1920-1954
Chairman of the Board, 1954-1966

THE NATIONAL GEOGRAPHIC SOCIETY is chartered in Washington, D. C., in accordance with the laws of the United States, as a nonprofit scientific and educational organization for increasing and diffusing geographic knowledge and promoting research and exploration. Since 1890 the Society has supported 1,394 explorations and research projects, adding immeasurably to man's knowledge of earth, sea, and sky. It diffuses this knowledge through its monthly journal, NATIONAL GEOGRAPHIC; supplement maps distributed to members; its books, globes, atlases, filmstrips, and educational films; *National Geographic WORLD*, a magazine for children age 8 and older; information services to press, radio, and television; technical reports; exhibits from around the world in Explorers Hall; and a nationwide series of programs on television.

Articles and photographs of travel, natural history, and expeditions to far places are desired. For material used, generous remuneration is made.

ROBERT E. DOYLE, President
GILBERT M. GROSVENOR, Vice President
OWEN R. ANDERSON, Vice President and Secretary
HILLEARY F. HOSKINSON, Treasurer
WILLIAM T. BELL, FRANK S. DELK,
LEONARD J. GRANT, RAYMOND T. McELLIGOTT, JR.,
C. VERNON SANDERS, EDWIN W. SNIDER
Associate Secretaries

BOARD OF TRUSTEES

MELVIN M. PAYNE, Chairman of the Board
LLOYD H. ELLIOTT, Vice Chairman
President, George Washington University
MELVILLE BELL GROSVENOR, Chairman Emeritus
THOMAS W. McKNEW, Advisory Chairman

FRANK BORMAN, Chairman of the Board and President, Eastern Airlines
J. CARTER BROWN, Director, National Gallery of Art
WARREN E. BURGER, Chief Justice of the United States
ROBERT E. DOYLE, President, National Geographic Society
CRAWFORD H. GREENEWALT, Director, E. I. du Pont de Nemours & Company
GILBERT M. GROSVENOR, Editor, National Geographic
ARTHUR B. HANSON, General Counsel, National Geographic Society
CARYL P. HASKINS, Former President, Carnegie Institution of Washington
CARLISLE H. HUMELSINE, President, The Colonial Williamsburg Foundation
MRS. LYNDON B. JOHNSON
CURTIS E. LeMAY, Former Chief of Staff, U. S. Air Force
WM. McCHESNEY MARTIN, JR., Former Chairman, Board of Governors, Federal Reserve System
LAURANCE S. ROCKEFELLER, President, Rockefeller Brothers Fund
ROBERT C. SEAMANS, JR., Former Administrator, Energy Research and Development Administration
FREDERICK G. VOSBURGH, Former Editor, National Geographic
JAMES H. WAKELIN, JR., Former Assistant Secretary of Commerce for Science and Technology
JAMES E. WEBB, Former Administrator, National Aeronautics and Space Administration
CONRAD L. WIRTH, Former Director, National Park Service

Trustees Emeritus
H. RANDOLPH MADDOX
JUAN T. TRIPPE
ALEXANDER WETMORE
LLOYD B. WILSON
LOUIS B. WRIGHT

COMMITTEE FOR RESEARCH AND EXPLORATION

MELVIN M. PAYNE, Chairman
EDWIN W. SNIDER, Secretary
ALEXANDER WETMORE, Chairman Emeritus

BARRY C. BISHOP, National Geographic Staff, ROBERT E. DOYLE, GILBERT M. GROSVENOR, MELVILLE BELL GROSVENOR, CARYL P. HASKINS, STERLING B. HENDRICKS, Scientist Emeritus, U. S. Department of Agriculture, THOMAS W. McKNEW, BETTY J. MEGGERS, Research Associate-Anthropology, Smithsonian Institution, ROBERT C. SEAMANS, JR., T. DALE STEWART, Physical Anthropologist Emeritus, Smithsonian Institution, GEORGE E. STUART, FREDERICK G. VOSBURGH, JAMES H. WAKELIN, JR., GEORGE E. WATSON, Curator of Birds, Smithsonian Institution, FRANK C. WHITMORE, JR., Research Geologist, U. S. Geological Survey, CONRAD L. WIRTH, LOUIS B. WRIGHT, and PAUL A. ZAHL, Former Senior Scientist, National Geographic Staff

Assistant Secretaries of the Society: JOSEPH B. HOGAN, JAMES P. KELLY, ADRIAN L. LOFTIN, JR., LEWIS P. LOWE, WARD S. PHELPS, CLETIS PRIDE. *Assistant Treasurer:* ALFRED J. HAYRE. Assistants to the President: Earl Corliss, Jr., Leonard J. Grant, Richard E. Pearson

Secretary's Staff: Accounting: Jay H. Givans, William G. McGhee, David H. Peters, Martha Allen Baggett. *Administrative:* Ruth E. Clark, Frederick C. Gale, Robert V. Koenig, Joyce S. Sanford, Frank M. Twigger. *Cashier:* Dorothy M. Wagner. *Computer Center:* James G. Schmelzer. *Data Assembly:* Peter F. Woods. *Employee Benefits:* Howard R. Hudson, Mary L. Whitmore. *Explorers Hall:* Peter Purpura (Curator). *Medical:* Thomas L. Hartman, M.D. *Member Relations:* Paul B. Tylor. *Membership Promotion and Statistics:* Charles T. Kneeland (Manager), Thomas M. Kent. *Payroll:* Dorothy L. Dameron. *Personnel:* Robert E. Howell, James B. Mahon, Glenn G. Pepperman, Shirley N. Wilson. *Printing and Production Control:* Joe M. Barlett, Frank S. Oliverio, Wilhelm R. Saake, James M. Swartz. *Promotion and Educational Services:* Carl W. Harmon, Jr., Peter P. Jones, Jerome F. Owecke, F. William Rath, Robert J. Warfel, Towne Windom. *Publications:* Geneva S. Robinson. *Purchasing:* Robert G. Corey, Thomas L. Fletcher, Sheila H. Immel. *Translation:* Zbigniew Jan Lutyk

COPYRIGHT © 1977 National Geographic Society, 17th and M Sts. N.W., Washington, D. C. 20036. All rights reserved. Reproduction of the whole or any part of the contents without written permission is prohibited.

NATIONAL GEOGRAPHIC MAGAZINE

MELVIN M. PAYNE *Chairman of the Board*
ROBERT E. DOYLE *President of the Society*
MELVILLE BELL GROSVENOR *Editor Emeritus*

GILBERT M. GROSVENOR *Editor*
JOHN SCOFIELD *Associate Editor*

Senior Assistant Editors
W. E. Garrett (Graphics), Joseph Judge (Articles)
Jules B. Billard, Robert L. Breeden, James Cerruti,
Allan C. Fisher, Jr., Kenneth MacLeish, Samuel W. Matthews,
Carolyn Bennett Patterson, Herbert S. Wilburn, Jr.

Assistant Editors: Andrew H. Brown, William Graves, Robert P. Jordan, Edward J. Linehan, Bart McDowell, Merle Severy, Kenneth F. Weaver (Science)

Senior Editorial Staff: Thomas Y. Canby, William S. Ellis, Rowe Findley, Bryan Hodgson, Elizabeth A. Moize, John J. Putman, Gordon Young

Foreign Editorial Staff: Thomas J. Abercrombie, David S. Boyer, Howard La Fay, Volkmar Wentzel, Peter T. White

Editorial Staff: Harvey Arden, Kent Britt, Mike W. Edwards, Rick Gore, Noel Grove, Alice J. Hall, Werner Janney, David Jeffery, Michael E. Long, John L. McIntosh, Ethel A. Starbird, George E. Stuart (Archeology), Priit J. Vesilind

Art Director: Howard E. Paine; Charles C. Uhl (Asst.), Robert E. Pullman

Research: Ann K. Wendt (Chief); Frances H. Parker (Associate Chief); Carolyn H. Anderson, Susan L. Anderson, Judith Brown, Marcia M. Butler, Susan P. Byrnes, Susan Day Fuller, Ann B. Henry, Jan Holderness, Levenia Loder, Jean B. McConville, Carol M. McNamara, Lesley B. Rogers, Frances W. Shaffer, Michaeline A. Sweeney. *Correspondence:* Carolyn F. Clewell, Clifford R. DuBois. *Geographic Information:* Bette Joan Goss

Library: Virginia Carter Hills (Librarian); Patricia Murphy Smith (Assistant Librarian), Carolyn Locke, Louise A. Robinson, Marta Strada

Editorial Administration: Joyce W. McKean, Assistant to the Editor; Virginia H. Finnegan, Lucille L. McInerney, Winifred M. Myers, Shirley Neff, M. Jean Vile (Assistants); Jolene M. Blozis (Indexes); Evelyn Fox, Dolores Kennedy (Travel); Lorie Northrop, Mary Anne McMillen (Records)

ILLUSTRATIONS STAFF: ***Illustrations Editor:*** Thomas R. Smith. *Art Editor:* Andrew Poggenpohl. *Assistant Illustrations Editors:* David L. Arnold, O. Louis Mazzatenta, Charlene Murphy, Robert S. Patton, Elie S. Rogers, W. Allan Royce, Jon Schneeberger, Mary Griswold Smith. *Layout and Production:* H. Edward Kim. *Picture Editors:* Bruce A. McElfresh, Paula C. Simmons. Barbara A. Shattuck (Assistant). *Librarian:* L. Fern Dame. *Assistant Librarian:* Carolyn J. Harrison

Geographic Art: William N. Palmstrom (Chief); Walter Q. Crowe, John D. Garst, Jr. (Assistant Chiefs). *Artists:* Lisa Biganzoli, William H. Bond, John W. Lothers, Robert C. Magis, Ned M. Seidler, Lloyd K. Townsend. *Cartographic Artist:* Snejinka Stefanoff. *Map Editor:* John T. Blozis. *Research:* Virginia L. Baza, Dorothy A. Nicholson, Ann Ruhnka. *Production:* Isaac Ortiz (Supervisor); Iskandar Baday, Elie Sabban, Leo B. Zebarth

Engraving and Printing: Dee J. Andella (Chief); William W. Smith (Assistant Chief); John T. Dunn, John R. Metcalfe, James R. Whitney

PHOTOGRAPHIC STAFF: ***Director of Photography:*** Robert E. Gilka. *Assistant Directors:* Dean Conger, Joseph J. Scherschel. *Photographers:* James L. Amos, James P. Blair, Victor R. Boswell, Jr., Bruce Dale, Gordon W. Gahan, Otis Imboden, Emory Kristof, Bianca Lavies, Bates Littlehales, Robert W. Madden, George F. Mobley, Robert S. Oakes, Winfield Parks, Steve Raymer, Robert F. Sisson (Natural Science), James L. Stanfield. Lilian Davidson (Administration). *Film Review:* Guy W. Starling (Chief). *Photographic Equipment:* John E. Fletcher (Chief)

Photographic Services: Carl M. Shrader (Chief); Milton A. Ford (Associate Chief); Lawrence F. Ludwig (Assistant Chief); Herbert Altemus, Jr., David H. Chisman, Ellwood M. Kohler, Jr., Geoffrey T. McConnell, William S. Petrini, Claude E. Petrone, Joan S. Simms (Assistant)

RELATED EDUCATIONAL SERVICES OF THE SOCIETY

Cartography: William T. Peele (Chief); Richard K. Rogers (Assistant Chief). *Cartographic Staff:* Margery K. Barkdull, Charles F. Case, Ted Dachtera, Richard J. Darley, John F. Dorr, Russel G. Fritz, Charles W. Gotthardt, Jr., Thomas L. Gray, Catherine M. Hart, Donald A. Jaeger, Harry D. Kauhane, Mary Ann McAleer, Charles L. Miller, Robert W. Northrop, John F. Shupe, Charles L. Stern, Douglas A. Strobel, Tibor G. Toth, Thomas A. Wall, Thomas A. Walsh, Charles M. Wilson III

Books: Jules B. Billard (Chief); Thomas B. Allen, Seymour L. Fishbein (Associate Chiefs); Ross Bennett, Charles O. Hyman, Anne Dirkes Kobor, David F. Robinson, Verla Lee Smith

Special Publications and School Services: Robert L. Breeden (Chief); Donald J. Crump (Associate Chief); Philip B. Silcott (Assistant Chief); William L. Allen, Jody Bolt, Linda Bridge, Ronald Fisher, William R. Gray, Sallie M. Greenwood, Mary Ann Harrell, Suzanne J. Jacobson, Margaret McKelway Johnson, Geraldine Linder, Tee Loftin, Louisa V. Magzanian, Robert Messer, Jennifer C. Urquhart, Ursula Perrin Vosseler, George V. White, Merrill Windsor. *National Geographic WORLD:* Ralph Gray (Editor); Charles H. Sloan (Associate Editor); Ellen Joan Hurst, Patricia F. Robbins, Veronica Smith. *Books for Young Explorers:* Cynthia Ramsay. *Filmstrips:* Jimmie Abercrombie, James B. Caffrey, Margery G. Dunn, Jacqueline Geschickter, Jane R. McCauley, H. Robert Morrison, George Peterson, Judith E. Rinard

News Service: Paul Sampson (Chief); Donald J. Frederick, William J. O'Neill, Robert C. Radcliffe

Television and Educational Films: Dennis B. Kane (Chief); Sidney Platt (Educational Projects); Patricia F. Northrop (Promotion); Carl E. Ziebe, Yeorgos N. Lampathakis, Marjorie M. Moomey (Research). ***Lectures:*** Joanne M. Hess (Chief); Robert G. Fleegal, Mary W. McKinney, Gerald L. Wiley. ***Records:*** John M. Lavery (Chief)

ADVERTISING: *Director:* James L. Till, 1251 Avenue of the Americas, New York 10020. *Regional managers—Eastern:* George W. Kellner, New York. *Midwestern:* Robert R. Henn, Chicago. *San Francisco:* Cecil H. London. *Los Angeles:* Richard H. Lehman. *Detroit:* George E. Moffat. *Canada:* Robert W. Horan, New York. *International:* John F. Grant, New York. *Travel:* Gerald A. Van Splinter, New York. *European Director:* Michel A. Boutin, 90 Ave. des Champs-Élysées 75008, Paris. *Business Manager:* Peter W. Michaels

UM

Contents

Page

JANUARY 1977

EDITOR'S PAGE 1

MARS: OUR FIRST CLOSE LOOK

I—MARS AS VIKING SEES IT 3

Orbiters and landers of NASA spacecraft photograph the red planet

II—SIFTING FOR LIFE IN THE SANDS OF MARS 9

By Rick Gore

INSIDE CUBA TODAY 32

Article and photographs by Fred Ward (Black Star)

PUGET SOUND, SEA GATE OF THE NORTHWEST 71

By William Graves, with photographs by David Alan Harvey

THE GENTLE YAMIS OF ORCHID ISLAND 98

A picture story by Chang Shuhua

AN EYE FOR AN EYE: PAKISTAN'S WILD FRONTIER 111

By Mike W. Edwards, with photographs by J. Bruce Baumann

PROBING THE MYSTERY OF THE MEDICINE WHEELS 140

By John A. Eddy, with photographs by Thomas E. Hooper

FEBRUARY 1977

EDITOR'S PAGE 147

AUDUBON "ON THE WING" 149

By David Jeffery, with photographs by Bates Littlehales

TO LIVE IN HARLEM. 178

By Frank Hercules, with photographs by LeRoy Woodson, Jr.

THE LONGEST MANNED BALLOON FLIGHT 208

By Ed Yost

THE PAGEANT OF RAJASTHAN 219

Article and photographs by Raghubir Singh

THE OHIO—RIVER WITH A JOB TO DO 245

By Priit J. Vesilind, with photographs by Martin Rogers

Map supplement included—*Close-up: U. S. A., Illinois, Indiana, Ohio, and Kentucky*

ELECTRONIC VOYAGE THROUGH AN INVISIBLE WORLD 274

By Kenneth F. Weaver

MARCH 1977

EDITOR'S PAGE 291

EGYPT: TWO PERSPECTIVES

I—DAZZLING LEGACY OF AN ANCIENT QUEST 293

Text by Alice J. Hall

II—CHANGE COMES TO A CHANGELESS LAND 312

Article and photographs by Thomas J. Abercrombie

AMERICA'S LITTLE MAINSTREAM 344

By Harvey Arden, with photographs by Matt Bradley

Our first "national river", the Buffalo

THE PHILIPPINES: BETTER DAYS STILL ELUDE AN OLD FRIEND 360

By Don Moser, with photographs by Bruce Dale

CONSIDER THE SPONGE 392

Text by Michael E. Long, with photographs by David Doubilet

CHIEF JOSEPH 409

Article and photographs by William Albert Allard

UMI

Page

APRIL 1977

EDITOR'S PAGE 435

ONE CANADA—OR TWO? (QUEBEC) 436
By Peter T. White, with photographs by Winfield Parks

A WALK ACROSS AMERICA 466
Text and photographs by Peter Gorton Jenkins

TREK TO NEPAL'S SACRED CRYSTAL MOUNTAIN 500
Article and photographs by Joel F. Ziskin

STRIKING IT RICH IN THE NORTH SEA 519
By Rick Gore, with photographs by Dick Durrance II

JAPAN'S WARRIORS OF THE WIND 551
Text by John Eliot, with photographs by David Alan Harvey
Dueling kites honor firstborn sons

UNSEEN LIFE OF A MOUNTAIN STREAM 562
Article and photographs by William H. Amos

MAY 1977

EDITOR'S PAGE 581

THE CELTS 582
By Merle Severy, with photographs by James P. Blair and paintings by Robert C. Magis
Double map supplement included—*Europe* and *Celtic Europe*

MALAYSIA: YOUTHFUL NATION WITH GROWING PAINS 635
By William S. Ellis, with photographs by David Alan Harvey

THE TREE NOBODY LIKED 669
By Rick Gore, with photographs by Bianca Lavies
Red mangroves prove valuable to wildlife and commercial fisheries

VESTMANNAEYJAR: UP FROM THE ASHES 690
By Noel Grove, with photographs by Robert S. Patton

NEW YORK'S LAND OF DREAMERS AND DOERS (FINGER LAKES) 702
By Ethel A. Starbird, with photographs by Nathan Benn

JUNE 1977

EDITOR'S PAGE 725

A WAY OF LIFE CALLED MAINE 727
By Ethel A. Starbird, with photographs by David Hiser

LOCH NESS: THE LAKE AND THE LEGEND 759
By William S. Ellis, with photographs by Emory Kristof and David Doubilet

SOUTH AFRICA'S LONELY ORDEAL 780
By William S. Ellis, with photographs by James P. Blair

MONT SAINT MICHEL 820
By Kenneth MacLeish, with photographs by Cotton Coulson

THE HUICHOLS, MEXICO'S PEOPLE OF MYTH AND MAGIC 832
By James Norman, with photographs by Guillermo Aldana E.

SONG OF HOPE FOR THE BLUEBIRD 855
By Lawrence Zeleny, with photographs by Michael L. Smith

FOUR NEW BOOKS TO HELP YOU KNOW YOUR WORLD 866
1977-78 series: *Still Waters, White Waters; Nature's Healing Arts; The Mysterious Maya; Powers of Nature*

Index VOLUME 151 JANUARY-JUNE 1977

January	pp.	1-146	April	pp.	435-580
February	pp.	147-290	May	pp.	581-724
March	pp.	291-434	June	pp.	725-870

Titles and illustrations in bold face

A

Aamo, Bjørn Skogstad 547
Abbasiyya (quarter), Cairo, Egypt **314-315**
Abdel-Ghani, Mohammed Ali 336
Abdel-Hafez, Mahmoud 318
Abdul-Jabbar, Kareem 195
Abdul Talib bin Mahmood 651
Abercrombie, Thomas J. 291; ***Omens for a Better Tomorrow.*** Mar., 312-343
Aberdeen, Scotland: Oil impact 524, **527**, 530
Abriachan, Scotland 778
Abu Rudeis, Egypt: Oil camp 319
Abu Simbel, Egypt: Temples 336, interior **308-309**
Abyssinian Baptist Church, Harlem **198;** Minister 204-206
Acadia National Park, Maine 752, 753
Adam Clayton Powell, Jr., Boulevard, New York 187
Adams, Alexander B. 167
Addams, Charles 722
Africa *see* Egypt; South Africa
Afridis (Pathan tribe) 120, 122, 126-127
Afrikaans (language) 725, 783, 785, 788, 799
Afrikaners (people) 725, 783, **784, 785,** 788, 794, 797, 804, 812-813, 814
Agrarian reform: Cuba 42, 44
Agriculture *see* Farms and farming
Aguanish, Quebec 455
Ahman Haji Abdullah, Haji 658, 662
Air pollution: Ohio Valley 252, **265**
Aircraft: *June Bug* 718, 719, facsimile **718-719**, 719
Airplane: Huichols **852-853**
Airstrips: Huichol country, Mexico 845, 846, 850
Akram, Mohammed 133
Alabama: Walker's tour of **466-467**, 467-468, **485, 486, 489-491**, 493, **494-499**, 495, 497-498
Alberta (province), Canada: Medicine wheels 144, 146
Alcohol abuse: North Sea oil boomtowns 535, 541, 543, **545**
Aldana E., Guillermo, photographer: ***The Huichols, Mexico's People of Myth and Magic.*** June, 832-853
Aldereguía, Jorge 50, 51
Alesia, Gaul 611, 616
Alexander the Great: Celts and 607; Egypt 331, 337, 343; Pakistan 114, 129, 130
Alexandria, Egypt **342-343;** History 343
Alfonso, Alina **51**
Algae: Mountain streams **566**, 569, 577
Ali, Muhammad 196
Alise Sainte Reine, France 611
All-Indian Rodeo, Colville reservation, Wash. **421**
Allard, William Albert: ***Chief Joseph.*** Mar., 409-434
Allegheny River, Pa. **247**, 248
Allen, Cliff 432
Alness, Scotland: Oil impact 535, 538
Alonso, Alicia **61**
Alpha platform, Forties field, North Sea 521
Aluminium Company of Egypt, Nag Hammadi 336
Aluminum industry: Egypt 322, 336, worker **323;** Quebec, Canada 456
Aman-i-Room 114, 120, 129
Amenemope: Quoted 340
American avocets **176-177;** Audubon painting and print **164**
American Revolution: New York 709
"American Woodsman" (painting) **155**
America's Little Mainstream. By Harvey Arden. Mar., 344-359
Ames, Lona 757
Ammianus Marcellinus (Roman historian): Celts 601
Amos, William H. **571, 576;** Family **562,** 573, **576,** 577, 588; ***Unseen Life of a Mountain Stream.*** Apr., 562-580
Amphipod: Sponge dwelling **398**
Anderson, Betty 535
André, Madame 165
Andrésson, Sigmundur 697-698
Andros Island, Bahamas: Sponges **402-403**
Androscoggin (river), Maine-N.H. 731
Anemones: Sponge, growing on **396**
Anfushi (harbor), Alexandria, Egypt **342-343**
Angola: Cuban troops 52, 67, 786, 811; Independence 786, 811; South African soldiers in **816-817**
Animism: Rajasthan, India 233, festival **232-233; *Trek to Nepal's Sacred Crystal Mountain.*** By Joel F. Ziskin. Apr., 500-517
Anthony, Susan B. 716
Anticosti Island, Quebec, Canada: Balloon above **214**
Ants: Electron micrographs **283**
Aoife (Irish legend) **625**
Apartheid: South Africa 725, 781, 788, 789, 790, laws 788, 789, 792, 803, 805, opposition to 790, 791, 792, 811, 812-813, 814, 818-819
Aphids: Electron micrograph **276**
Apollo Theatre, Harlem 182, 188, 193
Appalachian Mountains, U. S. 476, 493; Map 469
Appalachian Trail, U. S. 477, 487
Appaloosas (horses) **416-417;** Forebears, possible 415, 417
Apples: Maine 730, 741, 745
Aquiculture: Maine 748; Philippines **376-377;** Puget Sound region **70,** 71, 92
Arab Socialist Union 333
Aran Islands: Celts 617, 622-623, 629-630; Fort, prehistoric **622-623**
Aravalli Range, Rajasthan, India **221**
Archimedes' screw: Egyptian irrigation 322, **328**
Arctic char (fish): Loch Ness, Scotland 772, **779**
Arden, Harvey: ***America's Little Mainstream.*** Mar., 344-359; Family 357, 359
Argon: Martian atmosphere 26
Arkansas *see* Buffalo National River
Arlandes, Marquis d' 212
Armed Forces Technical Institute, Cairo, Egypt 319, 322
Arnold, Béat 601, 603
Arnold, Walter 733, **733**, 734
Aroostook County, Maine **754-755;** Potatoes 737, 754
"Aroostook War" 755
Arrian (Greek historian): Celts 607
Arrow blenny (fish) **397**
Artesian wells: New Valley, Egypt **329,** 337
Arthritis: Electron micrograph **288**
Arthurian legends: Celtic origin 585, 588
Artists: ***Audubon "On the Wing."*** By David Jeffery. Feb., 149-177
Arverni (Celtic tribe) 607
Asbestos: Quebec, Canada 460, 462
Ash, volcanic *see* Eldfell
Asheville, N.C. 487
Asia *see* Dolpo, Nepal; Malaysia; Pakistan; Philippines; Rajasthan
l'Assemblée Nationale: Quebec, Canada 438
Astérix the Gaul (comic strip) 619, **632-633**
Asters **564**
Astronomy: Ancient *see* Medicine wheels; Planetary *see* Mars

UMI

Aswan High Dam, Egypt 309, 310, 316, 336, 337; Electricity 322, 336; Size 336
Asyut, Egypt 337
Atallah, Mahmoud, and family 333
Aten (Egyptian sun god) 293
Atheism: Cuba 41, 67
Atlantic Ocean: ***The Longest Manned Balloon Flight.*** By Ed Yost. Feb., 208-217
Attean Falls, Maine: Campsite near **740**
Attic cup: Châtillon sur Seine, France 589
Aubert, Bishop of Avranches 823, 826
Auburn, N.Y. 709
Audubon, Jean 149, 155, 156
Audubon, John 158, **159**
Audubon, John James: ***Audubon "On the Wing."*** By David Jeffery. Feb., 149-177
  America: Citizenship 158; Migration to 149, 155
  Birth 149
  Business ventures 156, 157-158
  Character 149, 155, 166, 167, 168
  Conservation concerns 162, 173
  Debts 149, 158
  Enemies 152, 157, 166, 167, 168
  Grave 168
  Hunter **155,** 156, 157, 158, 165, 168, 173
  Illegitimacy 149
  Naturalist 149, 158, 159, 162, 165, 168, 175
  Occupations 149, 155, 156, 157, 158, 165, 166, 167
  Ornithologist 149, 155, 168
  Paintings **150-154, 160-164;** Portraits **159,** 165, self-portrait **149,** 166
  Parents 149, 155, 156
  Physical appearance 155, 167
  Portrait **155**
  Publications 149, 151, 152, 156, 167, 168
  Sons 156, 158, **159,** 161, 165, 167; Painting by **155**
  Travels 149, 155, 156, 157-158, 162, 165, 166, 167
  Wife 149, 156, 157, 158, **159,** 166, 167, 168
  Writings 149, 151, 155, 156, 157, 158, 159, 162, 165, 170-171, 172, 173, 175, 176; Books 152, 161; Journal 149, 158, 165; Letters **148,** 166, 167
  Youth 149, 155, 156, 175
Audubon, Lucy Bakewell 149, 156, 157, 158, **159,** 166, 167, 168
Audubon, Victor 156, **159,** 167
Audubon Naturalist Society: Book 855
Augusta, Ky. **256-257**
Augustus (Roman emperor): Celts and 616
Auk, great: Audubon painting **162**
Aunt Len's Doll and Toy Museum, Harlem 185
Automobile races: Watkins Glen, N.Y. 719, 722
Autun, France 616
Auvergne (region), France 607
Auxois, Mont, France 611
Avaricum (ancient city) 607
Aviation: History 718, 719
Avocets, American **176-177;** Audubon painting and print **164**
Avranches, France: Bishop 823, 826
Axle pin, Celtic **603**
Azhar bin Raffei, Baharon 653
Al-Azhar Mosque, Cairo, Egypt 317

B

Bachman, John 167
Back-strap loom: Huichols **844**
Backpack **467, 469, 471, 499**
Bacolod, Philippines 384
Baguio, Philippines 376, 380
Bahamas: Sponges **402-403**
Baie-Comeau, Quebec, Canada: Aluminum industry 456
Bainbridge Island, Puget Sound: Ferry to 76, 78
Bajaus (people): Malaysia **663;** Zamboanga, Philippines 387
Bakalobeng (tribe): Chief 800, 815; Resettlement **800-801,** 815
Bakewell, Lucy *see* Audubon, Lucy Bakewell
Bakewell, William 156
Bala Hisar, Peshawar, Pakistan 127, 129
Ball-point pen gun, 25-caliber **135**
Ballard, Robert D.: Loch Ness monster search 762, 769, 772
Ballet: Cuba **60, 61;** Harlem 188, **200-201**
Balloons: Decorated **212;** History 212-213; Hot-air 212, **212, 213;** Manned flights 208, **212-213,** 217, casualties 208, 213, first 212, high-altitude 212, 217, low-altitude helium *see Silver Fox, outlined;* Transatlantic attempts 208, 212, 217; World records 208, 212
Baluch, Mehr Khan 136
Band concert: Gallipolis, Ohio **255**
Bangor, Maine 733; Population 730
Bangor, Wash.: Submarine base 81
Banks, George 535
Banks High School, Birmingham, Ala.: Football players **490-491**
Bannock Indians: Scouts 428
Bantu Urban Areas Consolidation Act (South Africa) 789, 792
Baptist churches: Harlem **198,** 202, 204; North Carolina 488
Bar Harbor, Maine 751, 753
Baragwanath Hospital, Soweto, South Africa **799**
Barges: New York canals 709; Oceangoing 76, 79; Ohio River **244,** 245, 248, 249, 267; Puget Sound **86**
Barker, Mildred 742, 745
Barkley, Yvonne **192**
Barley: Egypt 318, 322, 337; India 240, **240-241;** Nepal 500, 506, 508
Barred owl: Steuben engraving **724**
Barrel sponges **400-401;** Reproduction **401**
Barth, Fritz Eckard 589
Bartlett, Grace 415, 418
Baseball: Cincinnati, Ohio 257, player 261, 263, stadium **253,** 258, 261
Basilan (island), Philippines 387, 391
Bass: Buffalo National River 345, 351, bass pools 350-351, **352-353,** 359
Bassily, Samir 337
Bataan (province), Philippines 380, 381
"Bataan Death March" 380
Bath Iron Works, Bath, Maine 745
Battle-Ax people 588
Baumann, J. Bruce, photographer: ***An Eye for an Eye: Pakistan's Wild Frontier.*** Jan., 111-139
Baur, Chris 532
Bawa (tribespeople): Nepal 507
Bawiti Oasis, Egypt 322
Baxter, Everett 737
Bay Islands, Honduras: Sponges **392-393, 395, 400-401**
Bay of Pigs invasion (1961): Cuba 1, 37, 65, museum commemorating **64-65**
Bayoumi, Abdel Aziz 319
Bazaars: Cairo, Egypt 317; Pakistan 129, **132**
Bear Paw, Mont.: Battle 418, battlefield 419, **430-431,** 434
Bearpaw Mountains, Mont. 415, 428, **430-431**
Beas River, India 242
Beaubien, Phillipe de Gaspé 438
Beaver, Pa. 245, 248, 253
Beaver trapping 731
Bedare, Hassan 322
Bees: Blueberry pollination 740, 742; Electron micrographs **282, 286**
Beetles, aquatic **566, 572;** Larvae **564, 572,** 577
Belafonte, Harry 195
Belenos (Celtic god) 625
Belgae (Celtic tribe) 588
Belgium: Name origin 588
Bel-Har (subdivision), Cape Town, South Africa **803**
Belhurst Castle (restaurant), Geneva, N.Y. 713
Bell, Alexander Graham 719
Belle of Louisville (steamboat) **269**
Bellingham, Wash.: Fish ranch **70**
Bellon, Robert **828**
Below, Ted 688
Beltaine (Celtic festival) 581, 625
Beltsville, Md.: Bluebird trail 858, 864, 865
Bender, Richard 10
Bends: Death from 524
Benedictines: Mont Saint Michel, France 823, 824, 826, 829
Benguet Consolidated: Goldmin-

UMI

ing operation 377, 380
Benha, Egypt 333
Benn, Nathan, photographer: ***New York's Land of Dreamers and Doers.*** May, 702-724
Bennett, Ramona 93
Bethlehem, South Africa: Family **785**
Better Days Still Elude an Old Friend. By Don Moser. Mar., 360-391
Bhil, Karna **218-219,** 219
Bhils (people): Religion 233, festival **232, 233**
Biagtan, Severino 380
Bicentennial projects: *June Bug* facsimile **718-719,** 719
Biddeford, Maine 733
Biemann, Klaus 25
Big Cypress Swamp, Fla.: Drainage 682
Big Hole Basin, Mont. 427; Battle 426, 429
Big Hole National Battlefield, Mont. 427
Big Hole River, Mont. 427
Big Pine Key, Fla.: Red mangroves 675
Bighorn Medicine Wheel, Wyo. 140, **140-141,** 142, 143-144, 146; Diagram **141;** Venus, rising **142**
Bikaner, India: Palace **222-223, 236;** Silos near **238-239**
Biko, Steve **791**
Bilharzia (disease): Egypt 337
Binder, Alan 10
Bingo: Quebec, Canada 450, **463**
Biplane: *June Bug* 718, 719, facsimile **718-719,** 719
Birdbanding: Audubon 156
Birds: ***Audubon "On the Wing."*** By David Jeffery. Feb., 149-177; Red mangrove habitat 668, 679, 684, **684, 685,** 687, 688, **688-689,** cover ill.; Scotland 535, 539, **541,** 543-544; *see also* Bluebirds
The Birds of America (Audubon) 149, 151, 167, 168; Paintings **150-153, 160-164**
Birmingham, Ala. 493; High-school football players **490-491**
Birthday celebration **475**
Bitterroot Range, Idaho-Mont. 414
Bitterroot Valley, Mont. 423
Black ant: Electron micrograph **283**
Black-eyed Susans **355**
Black Mountains, N.C.: Highest peak **472-473,** 484
Black Muslims **190-191**
Black Nazarene, procession of the: Manila, Philippines **374**
Black Sash (South African organization) 792
Blackbirds, redwinged **170-171**
Blackflies 577; Larvae **565-566,** 577
Blacks: Alabama, conditions in 493, 495, **498-499;** North Carolina family **474-475,** 487-488; ***To Live in Harlem....*** By Frank Hercules. Feb., 178-207; *see also* South Africa, *outlined*
Blackwell, Elizabeth 713
Blair, James P., photographer: ***The Celts.*** May, 528-633; ***South Africa's Lonely Ordeal.*** June, 780-819
Blake, Robbie **785**
Bloemfontein, South Africa: Church service **784**
Blood River, South Africa 804
Bloomer, Amelia Jenks 709
Blue crabs: Red mangrove habitat **680-681**
Blue Hill Bay, Maine 753
Blueberries: Maine 740-741, **742**
The Bluebird (Zeleny) 855
Bluebirds, Eastern: ***Song of Hope for the Bluebird.*** By Lawrence Zeleny. June, 855-865
  Conservation and protection of 855, 858, 859, 864, 865
  Courtship song 858, 865
  Diet **854, 856,** 858, 859, 860, 865
  Enemies 864; Man 854, 858, 864; Raccoons 864; Sparrows 858, 864, 865; Starlings 854, 858, 864, 865
  Females **854,** 855, 858, **859,** 860, **860,** 865
  Fledglings 858, **859,** 865
  Flight 858, 860
  Habitat 858, 864, 865
  Males 855, **856-857,** 858, **859,** 860, **861,** 865
  Migration 860, 865
  Nesting boxes 854, 855, 858, 860, **864,** 865; Diagram **864;** Trails 858, 864, 865, map 859
  Nesting sites **854, 856-857,** 858, **862-863,** 864, 865
  Nestlings **854,** 855, **856-857,** 858, 859
  Orphans 855, 858, **859**
  Population decline 854, 855, 858
  Range 858; Map 859
  Reaction to cold weather 860, **860-861, 862-863**
  Species, related: Mountain 858, 865, **865;** Western 858, 865, **865**
  Territorial behavior 864, 865
Bluegrass (region), Ky.: Limestone water 267
Boadicea, Queen *see* Boudicca
Boats: Canoes **98-99, 346-347, 352, 358, 740, 868-869;** Coracle **618;** Curraghs 618, 630; Feluccas 322, **338-339;** Ferries 72, **73,** 76, 78, 95, **442;** Fishing vessels **82-83, 88-89, 450-451, 647;** Flatboats 157, 158, 165, 263, **270-271;** Funerary boat **296, 297;** Ice-canoes **454-455;** Mail boats **706,** 709; Pleasure craft **72, 73, 94-95, 765;** Sailboats **72, 73,** 83, **94-95; 706-707, 752-753;** Steamboats **269,** 19th century 252, 257, 269; Towboats 248 *see also Northern;* Yawl **752-753**
Boeing Company, Everett, Wash. 71, 78, 83, 86; First factory **86;** 747's 83, 86, **87;** Recession 78, 86
Boers *see* Afrikaners
Bohemia (region), Europe: Name origin 588
Boii (Celtic tribe) 588
Bologna, Italy: Name origin 588
Book of Kells 606, 620, 626; Illumination from **620;** Making of **621**
Books, NGS: Special Publications: *The Mysterious Maya; Nature's Healing Arts; Powers of Nature; Still Waters, White Waters* (1977-78 series) 866-870
Boomtowns, oil: Norway 526, 544, 547; Shetland Islands 539-541, 543, **544-545**
Boone, Daniel 158
Bootleggers: North Carolina 488
Bophuthatswana (homeland), South Africa 786, 800-801, 815; Map 787
Borneo (island) *see* Sabah; Sarawak
Borvo (Celtic god) 619
Bostdorff, Don 79
Botha, Roelof F. 790
Botswana: Independence 787; Labor pool for South Africa 787, 788, 796
Bouchard, Reggie 745, 748
Boudicca, Queen of the Iceni 601, 614
Bourassa, Robert 438, 455, 459
Bourbon whiskey: Distillery 267, **268**
Boxing: Cuba **47,** Olympic gold medalist **46;** Woman **192**
Boyd, Edythe 708
Bracelets, silver: Celtic **614**
Bradley, Matt, photographer: ***America's Little Mainstream.*** Mar., 344-359
Brae, Shetland Islands 543, **544-545**
Brahma (Hindu god) 229
Brains, human: Cornell collection 722
Brant, Russell 263
Bremerton, Wash.: Navy shipyard **81,** 82
Bremner, Ronnie 772
Brendan, Saint 618
Breton (language) 626
Breton women: Mont Saint Michel, France **830**
Bridges, Al **88**
Bridges: Alabama **499;** Ohio-Mississippi confluence **272-273**
Brigid, Saint 624-625
British: India 220, 222; Maine 731, 733, 755; Malaysia 637, 638, 640, 652, 653, 662; Pakistan 111, 114, 120, 122, 126, 127, 129, 136, 138; Quebec, conquest of 440, 441, 446, 463; South Africa 785, 792, 804
British Broadcasting Corporation 524
British Crown Jewels: Koh-i-noor diamond 129
British Petroleum: Environmentalist 544; North Sea oil 519, 521-522, 549, profits 524; Service station **533**
British Virgin Islands: Shipwreck **406-407;** Sponges **394, 397, 402,**

UMI

406-407
Brittany (region), France: Celts 581, 585, 617, 626
Brittle star (starfish) **396**
Brook darter 573
Brook trout **566,** 573, 579-580
Brooke, James 652
Brooks, cold-water: ***Unseen Life of a Mountain Stream.*** By William H. Amos. Apr., 562-580
  Amphibians **564**
  Arachnids **568, 569**
  Crustaceans 562, **565-566, 567,** 570, 576, 579
  Current **570-571,** 573, 576, 577, 579, 580
  Definition of 573
  Fishes 562, **564, 566,** 573, 579-580, **580**
  Food chain 562, 567, 569, 573, 579, 580
  Insects 562, **563, 564-566,** 567, 568, **569,** 570, **571, 572,** 573, **574-575, 576,** 577, **578-579,** 579, 580
  Life forms, abundance of 562, 570, 573, 580
  Mollusks **566, 569**
  Plant life **563, 564-566,** 569, **569,** 573, 575, 576, 577, 579, 580
  Surface life **564-566,** 579
  Underwater shelters **564-566, 569,** 573, **574-575,** 576-577, 580
  Winter 580
  Worms 570, 576
Brown, Frederick 23
Brown, James 188, 193
Brown pelicans **172;** Red mangrove habitat 688, **688-689**
Brownstones (houses): Harlem 178, **182-183, 184-185**
Brusey, Gregory 773, 778
Bryant, Connie 193
Bryant, William Cullen 710
"bubble cuffers" 731
Bucksport, Maine 752
Buddhas (statues): Bronze 508; Reclining **650**
Buddhism: Malaysia 640, **650,** 651; ***Trek to Nepal's Sacred Crystal Mountain.*** By Joel F. Ziskin. Apr., 500-517
Buffalo hunting: Nez Perce Indians 423, 427
Buffalo National River, Ark.: ***America's Little Mainstream.*** By Harvey Arden. Mar., 344-359
  Administration: National Park Service 345, 347, 351, 352, 356, 357, 359, plans 356-357
  Aerial view **344-345**
  Archeological site 359
  Area 347, 351
  Canoeing **346-347,** 347, 350-351, **352,** 355, 357, **358,** 359
  Geology 345, 350, 351
  "ghost town" near 359
  History of area 351, 352, 359
  Kayaking 347, 350
  Length 345
  Location 347; Map 350, 351
  National river, first designated 345
Bunyan, Paul 731, 733
Burlesque house: Truck stop 252
Burley tobacco: Electron micrograph **284;** Kentucky 254, 267
Burnham Junction, Maine 745
Burroughs, Edgar Rice 12
Burroughs, John 864
Busay Hacienda, Philippines 384
Buses: Peshawar, Pakistan **126-127**
Buthelezi, Gatsha 801, 815
Butkara (ruins), Pakistan 130
Butler, Murrell 166
Byrne, Francis 627

C

Cable car: Chitral river, Pakistan **127**
Cacofonix (comic strip character) 632
Cactus pollen **290**
Caddis flies **564;** Larvae **563,** cases **565-566, 574-575,** 577, nets **564, 575,** 577
Caesar, Julius: Celts 601, 607, 611, 616
Cagey, Sam 92
Cairo, Egypt 317, 318; Aerial view **314-315;** History 312, 317, 343; Population 314, 318; Traffic 317, 318
Cairo, Ill. 245, 248, 271, 272; Fisherman **272,** 273
Cairo University, Egypt 325, 336
Calais, Maine 734, 757
Caledonian Canal, Scotland: Lock **765**
Calendar Islands, Maine 745
Calendars: Celts 624-625
California condor: Audubon painting **161**
Caluya, Pio 380, 381
Calvert City, Ky. 271
Camels: India **228-229, 235, 242-243;** Pakistan **116-119,** 122
Cameron Highlands, Malaysia: Tea 663
Campbell, Alex 759, 763, **767,** 773
Campbell's Ferry, Idaho: Resident 420
Canada: Bluebird conservation 855, 864; Bluebird trail, world's longest 859, 865; Cuba, trade with 43, 46; Nez Perce Indians 415, 428; *see also* Quebec (province)
Canada lynx: Audubon painting **161**
Canadians: Maine 733, 738-739, 740, **742,** 755
Canals: Florida 682; New York 709; Rajasthan, India 222, **242-243;** *see also* Erie Canal; Suez Canal
Canandaigua, N.Y. 716
Canandaigua Lake, N.Y. 708, 716
Candle making: Huichols **845**
Cannelton Dam, Ohio River 267
Canoes: Buffalo National River **346-347, 352, 358;** Snake River **868-869**
Canoes, ceremonial: Orchid Island **98-99**
Canyon Creek, Mont.: Battle 428
Cape buffalo: South Africa **808-809**
Cape Coloureds *see* Coloureds: South Africa
Cape Town, South Africa 796, 804; Aerial view **782-783;** Coloureds 804-805, suburbs **802-803;** Founding 782-783, 797; Parliamentary capital 783, 786; Population 786
Caravans: Pakistan **118-119,** 122
Carbon: Organic chemistry and 12, 15, 23
Carbon dioxide: Brook life 569, 572, 573; Martian atmosphere 11, 26, 31
Carbon 14: Viking missions experiments 15, 16, 23, 24
Cargill Salt Company mine, Lansing, N.Y. 722-723
Caribbean region *see* Cuba
Carnutes (Celtic tribe) 601
Carolina parakeets: Audubon painting **152**
Carr, Bob 252, 256
Carr, Michael H. 28
Carroll, Diahann 195
Carson, Peter 524
Cary, Basil 773
Cary, Winifred **763,** 773
Cascade Range, U. S.: Peaks 71, **74,** 83, 85; Timber industry **84-85,** clear-cutting practices 93
Casco Bay, Maine 745
Castro, Fidel 1, 32, 33, 36, 37, 42, 43, 46, 61, **61,** 67, **68,** 69, **69**
Castro, Raúl 37
Catedral, Leila 385
Catfish Row: Charleston, S.C. 184
Catorce, Mexico 836
"Cattle Raid of Cooley" 627
Caves, underwater: Virgin Gorda (island) **394**
Cawayan, Philippines 372-373, 376, **378, 379**
Cayuga Indians 709
Cayuga Lake, N.Y. 708, 709, 722
Cebu, Philippines: Marketplace **386-387;** Youth **384**
Ceiba del Agua, Cuba: School 43, **49,** student field workers **48**
Cells: Electron micrographs **288, 289;** Fusion of **280**
Celtes 585
Celtic languages 584, 600, 617, 621, 626, 630; Map 617
Celts 581;
  Celtic Europe. May supplement
  The Celts. By Merle Severy. May, 582-633
    Aristocracy 589, 601, 606
    Art **582-583, 590-591, 592, 593, 600, 602,** 603, **603, 604-605,** 606, **607, 608, 609, 612-613, 614, 615, 627;** Illuminated manuscripts 606, **620,** 626-627
    Boats 601, 603, **618,** 630

  Calendar 624-625
  Character 600, 607, 614, 626, 632
  Chariots **586-587,** 588, 600, 611
  Christianity 616, 619, 620, 621, 624, 626, 627, 629, 630
  Clothing 584, 600, 606
  Festivals 582, 584, **586-587,** 621, 624-625
  Foods 597-601
  Forts 589, **592,** 601, 607, 611, **622-623**
  Head hunting 597, 600, 603, 606
  History 584, 585, 588, 592, 597, 600, 607, 611, 614, 616, 617, 618, 619, 627, 630, 632
  Horses 606, 608, 619; Races **586-587**
  Industry 588, 589, 601, **610-611**
  Inventions 588, 601, 611
  Iron 585, 588, 589, 590, 592, 601, 611
  Languages 584, 600, 617, 619, 621, 626, 630; Map 617
  Legends 585, 588, 608, 618, 621, **624-625,** 627, 629
  Metalwork **582-583,** 590, **590-591, 592, 593, 600,** 601, **602, 603,** 606, **607, 608, 609, 610-611, 612-613, 614, 615, 627**
  Pastimes **586-587, 597,** 600-601
  Places named for 588, 600, 607
  Range of influence 585, 588, 589
  Religion 592, 601, 608, 624-625; Beliefs 588, 589, 597, 603, 612, 616, 621, 627, 630; Gods and goddesses **582-583, 591, 604-605,** 606, 608, **612-613,** 619, 627; Pilgrimages 619, 627, **628,** 629, **629;** Rites 582, 584, 606, 621; Sacrifices, human **598-599,** 601, 606, 625; *see also* Christianity, *above*
  Superstitions 621, 624, 629, 630
  Trade 588, 589, 601, 603, 606
  Tribes 588, 589, 600, 601, 607
  Warfare 592, **594-596,** 600, 607, 611, 616
  Weaponry 589, 590, 592, **593,** 600
  Women's rights 588, 589, 601, 614
Cemetery: Vestmannaeyjar, Iceland **692, 693**
Cernunnos (Celtic god) **612**
Céspedes, Carlos Manuel de 40-41
Chamberlain, Wilt 195
Champlain, Samuel de 442, 444
Chan Asomsatana 507, 508, 516
Change Comes to a Changeless Land (Egypt). By Thomas J. Abercrombie. Mar., 312-343
Chanson de Roland 827
Chaong (Iban) 652
Chapel of the Twin Altars, Mont Saint Michel, France 823, 826
Chariots: Celts **586-587,** 588, 600, 611
Charlemagne 826, 827
Charlie platform, Forties field, North Sea 519, 521
Chartres, France: Celts 601, 619
Château Frontenac (hotel), Quebec, Quebec **442-443,** 446
Chávez, Ovideo **40**
Checker game: Harlem **204-205**
Checkley, Dave **73**
Cheese, curd: Nepal 500, **506**
Chemical industry: Ohio River 250, 252, 271
Chemical pollution: Steubenville, Ohio, area 252
Chemquasabamticook Lake, Maine 731
Chemung River, N.Y.: Flood 723, 724
Cheng Ho 662
Cheops (pharaoh): Funerary boat **296, 297;** Statuette, ivory **296**
Cheshire, Ohio: Power plant 253
Cheyenne Indians 420; Scouts 428; Sun-dance lodges 140, 141, 144
Chicoutimi, Canada 450; Carnival **462-463**
Chief Joseph. By William Albert Allard. Mar., 409-434
Chief Joseph Dam, Columbia River 420
Chimney-pot sponges **392-393**
Chin Peng 638, 643
China Sea, South: Storm off Malay Peninsula **648-649**
Chinatown, Kuala Lumpur, Malaysia **642,** 663, 666
Chinese: Malaysia 635, 636-637, 638, 641, **642, 643,** 647, 648-649, 651, 653, 657, 658, 662, 663, 666, financial control 643, 647, 649, 657, population 647
Chitral, Pakistan 133; Bazaar **132**
Chitral District, Pakistan 130, 133; Farms **112-113;** Population 133; Shepherds **131,** 133
Chitral River, Pakistan: Cable car crossing **127**
Chitrali (language) 133
Chivarra, Miguel 849, 853
Christianity: Celts 616, 619, 620, 621, 624, 626, 627, 629, 630; Huichols 832, 841, 843, 845, 846; Philippines 365, 369, 372, 378, 387, Holy Week celebrations **374, 375;** Quebec 438, 460, 463; Southeast (region), U. S. 488, **494-495,** 495, 497-498
Christmas celebration: Serbian 250, **250**
Chryse Planitia, Mars **27;** Viking 1 landing site **2-3,** 5, 9, 10, 13, **14-19,** 25, **27,** rocks **20-21**
Chuck-will's-widows: Audubon painting **160**
Churchill, Winston: Pakistan 126
Cigars, Cuban 48, 50; Making of 48, **53**
Cilliers, C. J. P. 808
Cincinnati, Ohio 158, 248, 256-257, **258-259,** 263, 270; Baseball 257, stadium **253,** 258, 261; Steamboat 269
Cincinnati Reds (baseball team) 256, 257; Player 261, 263; Stadium **253,** 258, 261
Cirone, Jennie **756,** 757
Citizen Action for Safer Harlems (CASH): Antidrug rally **194**
City Deep Mine, Johannesburg, South Africa: Dormitory **796-797**
Clam diggers: Maine **750-751,** 751
Clark, Ian 541
Clark Air Base, Luzon, Philippines 391
Clay, Henry 165
Cleaner shrimp **402-403**
Clear-cutting: Puget Sound area, Wash. 93
Clearwater River, Idaho: Battle 423
Clifty Creek power plant, Madison, Ind.: Smokestacks **265**
Club Pompeii, Huntington, W.Va. 253
Clyde, River, Scotland 530
Coal: Montana 428; Ohio Valley 245, 249, 250, 254, power plants fired by 252-253, 254, **265,** transportation 253-254
Coho salmon: Puget Sound **70**
Cohocton, N.Y. **702-703**
Coins: Celtic **607;** Macedonian **607;** South African krugerrands **796**
Coleman, Carlton **194**
Collar, sacred: Celts 600, **608**
Collective farming: Cuba 63
Coloureds: South Africa 786, 797, **802-803,** 804-805, 808
Columba, Saint 626; Loch Ness monster and 626, 759, 761
Columbia River, Canada-U. S. 434; Hydroelectric dams 420
Colville Indian Reservation, Wash. 431, 432; Burial rites **410-411;** Celebration, annual 434; Cemetery 409; Rodeo **421**
Comex Diving Limited 524
Comic strips: "Astérix the Gaul" 619, **632-633**
Communal living: The Farm, Summertown, Tenn. **480-483,** 488, 492-493
Communist Party: Cuba 32, 40, 41, 42, 43, 44, 48, 61; Malaysia 638, 643
Communists: Africa 786, 811; Malaysia 635, 636-637, 638, 643, 647, 653, 666; Philippines 368, 381, 384; Tibet 505, 508
Compton, Neil 351
Computer applications: Viking missions 7, 13, 24, 25
Conant, Jim 737
Concord grapes 718; Harvest **714-715**
Condeep platforms, North Sea: Construction **520, 521,** 544; Transportation 521, **522-523**
Condor, California: Audubon painting **161**
Conservation: Audubon's contri-

bution to 168; *see also* Blue birds; Red mangroves
Consider the Sponge. Photos by David Doubilet. Mar., 392-407
Cook, Charles **189**
Cooke, Percy 522
"cool tower": Yami house **107**
Cooper, Thomas 539
Cooper Half Malamute (dog) 467, 468, 469, **469,** 470, **471, 472,** 477, 484, 487, 492; Death and burial **492,** 493
Copper: Philippines 365, 377
Copra: Philippines 365, 385
Cora Indians: Plan Huicot 845, 850
Coracle **618**
Coral: Red mangrove habitat **675;** Sponges growing on **392-393**
Coral cave: Orchid Island **100**
Coral snake: Audubon painting **160**
Cormac 625
Corn: South Africa **811**
Cornell, Ezra 722
Cornell University, N.Y. 704, 708, 722; Students **716**
Cornfield: Ohio River island **262-263**
Corniche (boulevard), Alexandria, Egypt **342**
Corning, N.Y.: Flood (1972) 723, 724; Glass production 708, 724, **724**
Cornish (language) 584, 617
Cornwall, England: Celts 582, 584, 617; Tin 589-590
Corregidor (island), Philippines 380, 381; Shrine 381, **381**
Cotabato, Philippines: Earthquake 391
Cotton: Egypt 328, 333, 340
Coulees: Montana 413, 428, 430
Coulson, Cotton, photographer: ***Mont Saint Michel.*** June, 820-831
Country stores: Alabama **466-467,** 467; Arkansas **356-357**
Cow Island Landing, Mont.: Army depot: Raid 415, 418
Coyote (mythical character) 409
Crabs: Red mangrove habitats 675, **680-681, 683;** Sponge camouflage **397**
Cranberry bogs: Maine 757
Crane, whooping **172-173**
Crayfish 562, **565-566,** 570, 579
Cree Indians: Quebec, Canada 459, 460
Crewe, Albert V. 278, **279**
Croagh Patrick, Ireland: Pilgrimages to 627, **628, 629**
Crofts and crofting: Scotland 535, Shetland Islands 539, **540-541, 544-545**
Cromarty Firth, Scotland: Oil impact 535, 538
Crow: Bikaner, Rajasthan **239**
Crow Indians 426; Medicine wheels, beliefs about 140; Scouts 428
Crowley Maritime Corporation: Seattle, Wash. 79
Crucible (steel company): Midland, Pa. 249, supervisor 250
Crucifix: Irish **627**
Crucifixion: Reenactment of **375**
Cruden Bay, Scotland 521
Crystal: Steuben 724, **724**
Crystal Mountain, Nepal: ***Trek to Nepal's Sacred Crystal Mountain.*** By Joel F. Ziskin. Apr., 500-517
Crystal Valley Grange: Dundee, N.Y. 713
Cuba 1; ***Inside Cuba Today.*** By Fred Ward. Jan., 32-69
  Agrarian reform 42, 44
  Agriculture 44; Cattle 42; Experimental farm 61, 67; Money crops 33, 34, 37, 48, **52-55,** 53, **62-63,** 67, 69; School farms 43, **48;** Small farmers 44, 48, 63
  Economy 33, 34, 37, 42, 48, 50, 51, 53, 55, 58-59, 61, 67, 69; Soviet subsidies 33, 38-39, 53, 58
  Educational system 41, 42-43, 48; Illiteracy reduced 42, 48; Schools, boarding 43, **48, 49, 51**
  Exodus, post-revolution 36, 37, 44, 50; Property abandoned **36,** 44
  Facts and figures 34
  Flag **34**
  Government 32, 33, 34, 36, 37, 40, 41, 42, 43, 44, 48, 50, 51, 53, 61, 69
  Health service, free 37, 40, 50-51, 56; Doctor-patient ratio 50; Hospital **35**
  Housing 41-42, 44, **44-45, 56;** Foreign advisors' 39
  Income, personal 40, 44, 51
  Map 34-35
  Military forces 39, 61, **64-65,** 69
  Nationalization, extent of 37, 44, 48, 50, 51, 63
  Population 34, 41
  Prisoners, political 43-44
  Private holdings 44, 48, **62-63**
  Professionals 40, 44, **45,** 51, **61;** Training of 43, **49,** 50, 51
  Rationing 33, 50, 56; Foreign advisors exempted 39-40
  Religion 34, 40, 41, 67; Churches 40-41, 67
  Shortages 33, 38, 40, 50
  Soviet involvement in 33, 38-39, 40, 42, 53, 58, 59, 61
  Standard of living 33, 42
  United States, relations with 32, 34, 36, 37, 46, 52, 65, 67, 69
  Workers 32, **32-33,** 39, 42, 43, 44, **46,** 48, **48, 49,** 50, 53, **53-55**
Cú Chulain (Irish legend) **624,** 627
Culloden, Scotland 621
Cumorah, Hill, N.Y. 708
Cunningham, Briggs 722
Curbelo, Hermenegildo 42
Curraghs 618, 630
Currie, Andrew 532
Currie, Malcolm 719
Curtiss, Glenn Hammond 718, 719
Custer, George: Death 420

D

DNA: Electron micrograph **280**
dacoits 219
Daily Graphic (balloon): Transatlantic attempt 212
Dairy farming: Cuba 42
Dakhla Oasis, Egypt 337
Dale, Bruce, photographer: ***The Philippines: Better Days Still Elude an Old Friend.*** Mar., 360-391
Daman (plain), Pakistan 136
Damariscotta, Maine: Marine-worm industry 748
Dams: Columbia River, U. S. 420; Egypt 309, 310, 316, 337, electricity 322, 336; Ohio River 248, 263, 266-267, diagram **249,** map 248-249; South Africa **794**
Dance: Cuba: Ballet **60, 61;** Egypt **311;** The Farm, Tenn. **483;** Harlem: Ballet 188, **200-201;** Huichols **843;** Yamis **104-105**
Dance Theatre of Harlem 188, **200-201**
Danube (river), Europe: Headwaters 603
Darling, Erik 716
Darra, Pakistan: Drug trafficking 122; Firearms sales **110-111,** 126, **135**
Darters: Brook darter 573
Davenport, Homer **471,** 481, 484; Home **470-471,** 484
Davin, M. Katherine 721
Davis, Sammy, Jr. 195
Day, Chris **806**
Day-care centers: Cuba 50, 53
Dazzling Legacy of an Ancient Quest (ancient Egypt). By Alice J. Hall. Mar., 293-311
Déception, Riviére, Canada 460
Decorator crabs: Red mangrove habitat **683**
Deelpan, South Africa 800, 815
Deer: Key deer **687;** Sambar deer 636; White-tailed **565,** 570
Deer Isle, Maine: Clam diggers **750-751**
Deimos (Martian moon) 26, **27**
"Delting Disaster": Shetland Islands 539
Dempster, E. L. 657
Dera Ismail Khan (district), Pakistan 133, 136, **137**
Derg, Lough, Ireland: Pilgrimages 629
De Rosier, Pilâtre 212
Desert: Rajasthan 219, 220, **242-243**
Dewey, George 368
Diamond knives 278; Inventor 279
Diamonds: Koh-i-noor 129
Diatoms, one-celled 576
Dijon, France: Celts 619
Dimbaza, South Africa: Children, death of 792, 796, 801; Grave **801**
Dinsdale, Tim **766**
Diodorus Siculus (Greek historian): Celts 600, 601
Dirst, Fred 359

- Distillery, Old Fitzgerald: Louisville, Ky. 267, **268**
- Divers: Loch Ness, Scotland **758, 773-776;** North Sea 524, **536,** 537
- Divine, Father 182
- Dixie, Idaho 420
- Dobson fly larva (hellgrammite) **565**
- Dogs **716;** *see also* Cooper Half Malamute
- Dolpo region, Nepal: ***Trek to Nepal's Sacred Crystal Mountain.*** By Joel F. Ziskin. Apr., 500-517
  - Farms and farming **509;** Crops 500, 506, 508
  - History 505, 510, 512
  - Horse racing 508, 510, 513
  - Inaccessability 503, 505
  - Livestock 500, 506, 507
  - Map 505
  - Nomads 500, 506, **506, 507,** 508
  - Religions: Animism 500, 506, 508, 512, 515, shaman 500, **501;** Buddhism 500, 506, 508, 512, 515, 516, 517, lamas 508, 510, **510,** 512, 515, monasteries **502-503,** 508, **509,** 510, votive tablets **511, 516**
- Donegal (county), Ireland: Pilgrimages 629
- Doran, Daniel **734**
- Doubilet, David 772, 779; photographer: ***Consider the Sponge.*** Mar., 392-407; ***Loch Ness: The Lake and Legend.*** June, 759-779
- Douglas, Gwendolyn **200**
- Douglas, Stanley J. 724
- Douglas, Stephen A. 716
- Douglas, William O. 352
- Douglas fir 83, **84,** 93
- Doves **88;** Good-luck symbol **665**
- Down East 745
- Dragonflies: Egg laying **565;** Nymphs **565, 578**
- Drake, Sir Francis: South Africa 805
- Drakensberg Range, South Africa **794-795,** 796
- Drapeau, Jean 461
- "Dreamer" religion: Nez Perce 431
- Drilling rigs: North Sea 521, 522, 539, accident 524
- *Drommedaris* (Dutch ship) 797
- Droughts: Egypt (1972) 316, 336
- Drug abuse: Harlem 178, 180, 189, 191, 193, 195, 201, 204, rally against **194**
- Drug traffic: Pakistan 122, 129-130
- Druids 597, 601, 603, 608, 619, 625; Human sacrifice **598-599,** 601
- Drumbuie, Scotland: Oil impact 532
- Drummond, John 710, 712, **713**
- Drumnadrochit, Scotland 759, 772; Highland games **764**
- Drums: Huichols **837**
- Drutob Senge Yeshe 510, 512, 516, 517; Painting of **515**
- Dry Tortugas, Fla.: Shrimp 681, 686
- Ducks: Duckling **756;** Redhead **176**
- Dukaza, South Africa: Sports show, annual **818-819**
- Du-Le-Rong gorge, Nepal **504**
- Dun Aengus, Inishmore (island), Aran Islands **622-623**
- Duncan, Sheena 792
- Dundee, N.Y.: Grange 713
- Durban, South Africa 786, 796, 804
- Durrance, Dick, II, photographer: ***Striking It Rich in the North Sea.*** Apr., 519-549
- Durrell, Lawrence 343
- Dust storms: Mars 20, **21,** 26
- Dutch East India Company: South Africa 782-783, 797
- Dutch Reformed church: South Africa 785
- Dutch settlers: Harlem 185; Malaysia 662; South Africa 782-783, 785, 788, 797, 804
- Duwamish Indians: Chief 78
- Dwyer, Cornelius "Geneva Red" 713

E

- Eagle: "Bird of Washington" 158
- Earth: Atmosphere 26, diagram **22**
- Earthquake: Mindanao, Philippines 391
- East Malaysia *see* Sabah; Sarawak
- Easter Ross, Scotland: Oil impact 535
- Eastern bluebirds: ***Song of Hope for the Bluebird.*** By Lawrence Zeleny. June, 855-865
- Eastport, Maine 734, 737; Oil refinery, proposed 737
- Eaton, Helen **748**
- Eddy, John A. **143; *Probing the Mystery of the Medicine Wheels.*** Jan., 140-146
- Edmund Pettus Bridge, Ala. **499**
- Edwards, Mike W.: ***An Eye for an Eye: Pakistan's Wild Frontier.*** Jan., 111-139
- Eels: Loch Ness, Scotland 772, **775**
- Effigies: Horse **584-585**
- Egypt 291; ***Egypt: Two Perspectives.*** Mar., 293-343
  - I—***Legacy of a Dazzling Past.*** By Alice J. Hall. 293-311
  - II—***Omens for a Better Tomorrow.*** By Thomas J. Abercrombie. 312-343
  - Agriculture 310, 312, 322, 333, 336, 337, **341;** Crops 318, 322, 328, 331, 333, 337, 340; Irrigation 316, 318, 322, **328,** 336-337, 340, artesian wells 328, 337
  - Area 316, 317
  - Armed forces 319, 325; Training 319, 322
  - Capital *see* Cairo
  - Development 318, 320, 330-331, 333, 336, 337, 340, 343
  - Drought (1972) 316, 336
  - Economy 317, 318; Inflation 314
  - Electrification 316, 322, 330, 333, 336
  - Facts and figures 316
  - Flag **316**
  - Folk art **326-327, 334-335,** 335
  - Foreign relations 318, 320, 325, 340; With U.S.S.R. 317, 318, 319, 322, 325, 336; With U.S. 317, 318, 319, 325, 337
  - Government 316, 317; Ministers 318, 319, 336; Parliament 333; President 317, **324**
  - History 312, 317, 331, 332, 333, 337, 340, 343 *see also* Egypt, ancient
  - Industry 318, 322, 336, 343; Workers **313, 323**
  - Map 316
  - Oases 322, 328, **330-331,** 337
  - Oil 317, 318-319; Production 319; Reserves 319
  - Peasants **310, 311,** 322, **328,** 336, 337
  - Population 316, 317; Increase 317
  - Pyramids 312, **312, 314,** 340, **341**
  - Religions 316, 317, 320, 326-327, 337
  - Suez Canal **320-321;** Reopening of 317, 318, 320; Revenues from 320
  - Wars with Israel 317, 318, 320, 325, 327
  - Women **325, 331,** 333, 336; Rights 325, 336
- Egypt, ancient: Hieroglyphs **293, 298-299, 301-303, 305-311;** History 295, 303, 305, 309; Pharaohs 293, 295, 296, 303, **305-307,** statues **294-296, 308-309;** Religion 293, 299, 300, 303, 306, gods 293, **294, 295, 300, 301,** 309; Temples 293, **308-309;** Tombs 293, 296, **298-299, 302-303,** 305, **306, 307, 310, 311**
- Egyptian General Petroleum Corporation 319
- Egyptian Museum, Cairo 293
- Ekofisk complex, North Sea **518-519,** 522, 524, **536-537,** 544, **546,** 548-549; 60-foot waves **534**
- El Alamein, Egypt 340
- El Bahariya, Egypt: Roman cistern 337
- El Balyana, Egypt 322
- El Daba, Egypt 340
- Eldfell (volcano), Heimaey, Iceland: ***Vestmannaeyjar: Up From the Ashes.*** By Noel Grove. May, 690-701
  - Ashfall **690-691,** 691, **692,** 693, 694, 695, 696-697, 698, 701; Average depth 695; Limit: map 694
  - Casualty 693
  - Eruption 691, **691,** 693, 695, 697-698, 701
  - Fires caused by 693, 694, 695
  - Height 693
  - Lava flow 691, 693, 694-695, 697, 698, 701; Map 694
  - Name 693; Former 693-694
  - Steaming 693, **695, 698-699**
  - Seawater, use of, to stem lava flow 695
  - Tephra, wind-driven: Damage

UMI

from **696-697**
  Village damaged by *see* Vestmannaeyjar, *outlined*
Electric power plants: Ohio Valley 252-253, **265**
Electron microscopes: ***Electronic Voyage Through an Invisible World.*** By Kenneth F. Weaver. Feb., 274-290
Electronic Voyage Through an Invisible World. By Kenneth F. Weaver. Feb., 274-290
Electronics plant, Cairo, Egypt **313**
Elela, Ahmad Abu 337
Elephants: Malaysia 636, **638**, 657-658, population 657
El Faiyum, Egypt: Pyramid of Meidum **341**; Space photo **332**
El Fashn, Egypt: Farm near **328**
Eliot, John: ***Japan's Warriors of the Wind.*** Apr., 551-561
Elisabeth Bolten (freighter): Recovered balloon **216**
Ellington, Duke 196, 201
Ellis, Robert O. 535
Ellis, William S.: ***Loch Ness: The Lake and the Legend.*** June, 759-779; ***Malaysia: Youthful Nation With Growing Pains.*** May, 635-667; ***South Africa's Lonely Ordeal.*** June, 780-819
Elmira, N.Y. 723, 724
"El Supremo" 384, 385
Emer (Irish legend) **624**
Encik, Mohammed Khan 657-658
Enda, Saint 630
Endangered species: Brown pelican **172**, 688, **688-689**; Ivorybill woodpecker **162**; Key deer **687**; Whooping crane **172-173**; *see also* Bluebirds
England: Celts 582, 584, 617; North Sea oil 519, 543, economic impact 521, 524, 530, 531, 532, 538
English Channel: Balloon flight across 213
Engraving: Glass 724, **724**
Epona (Celtic horse goddess) 606, 608, 619
Erie Canal, N.Y. 708, 709, 720
Erskine, David 521
Erving, "Doctor" Julius 195
Eskimos: Quebec, Canada 459, 460, 461
Espaldon, Romulo **388**, 391
Estrada, Angel 44, 48
Ethnology *see* Yamis
Europe: *Europe* and *Celtic Europe.* May supplement; *see also* Celts; North Sea
Evangelists: Alabama **494**, 497-498; Harlem **199**
Evans, Anna Maria 662
Evansville, Ind. 270
Everett, Wash.: Boeing Company 71, 78, 83, 86; Museum **86**; Plant **87**
Everglades (region), Fla.: ***The Tree Nobody Liked.*** By Rick Gore. May, 669-689
Excelsior III (stratosphere balloon) **213**, 217
Excursion boat: *Belle of Louisville* **269**
Exorcisms: Huichols **846-847**; Nepal 500, 508, 510
Explorer I (stratosphere balloon) **212**
Explorer II (stratosphere balloon) **213**
An Eye for an Eye: Pakistan's Wild Frontier. By Mike W. Edwards. Jan., 111-139
Eyrarbakki, Iceland 698
Ezbekia, Cairo, Egypt 317
Ezzo, Hassan 319, 322

F

FLQ *see* Front de Libération du Québec
Face paint: Huichols **833**, **837**, 840
Faherty, Padraic 630
Falcon god (Egyptian): Eye of **299**; Gold statue **300**; Slate carving **294**
Falcons: Gyrfalcon **151**; Peregrine **152**, 722
Fall Festival: Cohocton, N.Y. **702-703**
Falls of the Ohio, Louisville, Ky. 266
Family Planning Organization of the Philippines 385
Farahat, Ragaa 319
The Farm, Summertown, Tenn. **480-483**, 488, 492-493
Farmer, Bruce 157
Farmer, Crofton 11
Farms and farming: Cuba 34, 42, 44, 48, **52-55**, 53, **62-63**, experimental farms 61, 67, school farms 43, **48**; Huichols 836, 850, **850**, **851**, 852, education 845, 850; Maine 737, 741, 746-747, 754; New York 703, **704-707**, 712, **714-715**, 724; North Carolina **476-477**; North-West Frontier Province, Pakistan **112-113**, 127, 130, 136, **137**, opium poppies **123**, 129-130; Ohio Valley 254, **262-263**, 263, 267, 272; Rajasthan **240-241**; Tennessee **480-482**, 492
Farouk, King (Egypt) 333
Faw Qibli, Egypt 322
Fé, Luis de la 53
Feidlimid mac Crimthain 627
Felix, Mark **717**
Fell, Jack 678
Fellahin (people) 322, **328**, 333, 336, 337
Feluccas (boats) 322, **338-339**
Fennell, Janet 584-585
Ferguson, Bob 82-83
Fernández, Víctor, family 42, **56**, **57**
Fernández-Morán, Humberto 278
Ferns **566**; Maidenhair **355**
Ferries: Puget Sound, Wash. 72, **73**, 76, 78, 95; Quebec (city), Canada **442**
Festival of Tops and Kites, Pekan, Malaysia **660**
Festivals: Celts 582, 584, **586-587**, 621, 624-625; Cohocton, N.Y. **702-703**; Maine 748; Malaysia **660**; Orchid Island **104-105**; Quebec 444, **454-455**, **462-463**, religious 450-451; Shetland Islands 539; Vestmannaeyjar 698-699; Yamis **104-105**; *see also* Kite festivals
Feuds: Pathans 113, 120, 122, 135, 136, 138
Feynman, Richard 279
Field, George 377, 380
A Field Guide to the Birds (Peterson) 168
Field ion microscopes: Diagram **281**; Magnification: Graph **280-281**; Micrograph **281**; Principle 281
Fighting tops: Pekan, Malaysia **660**
Figueroa, Max 42-43
Filefish **101**
Filip, Jan 588, 601
Finger Lakes region, N.Y.: ***New York's Land of Dreamers and Doers.*** By Ethel A. Starbird. May, 702-724
  Colleges and universities 704, 708, 713, **716**, **717**, 722
  Extent 708
  Farmlands 703, **704-707**, 712, **714-715**
  Firsts 709, 713, 718, 719, 721, 722, 723
  Geology 704, 708
  Glass industry 708, 724, **724**
  History 708, 709, 710, 713, 716, 718, 719, 720-721
  Industries 708, 709, 712, 722 *see also* Glass, *above;* Wine, *below*
  Map 710
  Religious movements 708, 710, 712, **712-713**
  Satellite image **710-711**
  Senior citizens 710, 712, 713, **713**, 716, **723**
  Sports **706-707**, 719, 722, 723
  Tourism 706, 716
  Wine production 708, 718, 719; Vineyards **714-715**
  Women, notable 708, 709-710, 713, 716, 720-721
Finisterre, Cape, Spain: Celts 588
Fir: Hormones injected into **85**
Fire Mountain (volcano), Iceland *see* Eldfell
Fire truck, antique: Peshawar, Pakistan **121**
Firearms: Pathans **110**, 117, 120, 126, 133, **135**, 138
Fish eyes: Yami delicacy 101
Fish ranch: Puget Sound region **70**, 92
Fisher, Miers 155
Fishermen: Cairo, Ill. **272**, 273; Egypt **342-343**; Swat River, Pakistan **128**; Vestmannaeyjar, Iceland 693, **694**, 695; *see also* Yamis
Fishes: Brooks, cold-water **564**,

UMI

566, 573, 579-580, **580;** Buffalo River, Ark. 345, 351, 352, 359; Loch Ness, Scotland 763, 772, 773, **775, 779;** Ohio River 248, 272, 273; Red mangrove habitats **672-673,** 675, 679, **680, 681;** Sponge habitats **397, 403**
Fishing (sport): Puget Sound region **73**
Fishing industry: Cuba 58-59; Florida 673, 679, 680, 681, 682, 686, 687; Maine 730, 731, 737, 745; North Sea 535, 538, oil impact 531, 544, 547; Puget Sound area 76, **88-89,** Indian technique **82-83;** Quebec, Canada **450-451,** 451, 455, **457;** *see also* Lobstering
Fishing village *see* Vestmannaeyjar, Iceland
Fishponds: Luzon, Philippines **376-377**
Fiskhellanef, Heimaey, Iceland 691
Fitz, Sam 577
Fjeld, Magne 547
Flag, U. S.: 24-hour-a-day display **720**
Flagon, Celtic: Handle **602**
Flatboats: Ohio River 157, 158, 165, 263, **270-271**
Flatworms 679, **679**
Floods and flood control: Chemung River, N.Y. 723, 724; Ohio River 270-271
Florance, Joseph and Rena 708
Florida *see* Everglades
Florida Bay, Fla.: Red mangrove **668-669;** Shrimp 686; Sunset **668-669**
Florida Keys, Fla.: Red mangroves 670, 675
Flowers: Asters **564;** Red mangrove **676,** 678
Flutes, bamboo **218**
Flye, Ivan 748
Flying fish 99
Flying-fish festival: Orchid Island **104-105**
Fog: Ohio River 252, **258-259**
Folio, double elephant 151, 167, 168
Folk medicine: Nepal **510**
Folsom, Dick 734
Food chain: Red mangrove base 670, 671, 679, 687, 688
Football: Alabama high-school players **490-491**
Forbes Park, Makati, Philippines 364
Forbis, Dick 144, 146
Ford, Gerald R.: Greeting to balloonist 217
Forestry: New methods **85,** 93
Fort Augustus, Scotland 759, 763, 765; Policemen **766-767**
Fort Drum, Manila Bay **380**
Fort George, Quebec 460
Forties field, British sector, North Sea 519, 521-522, 524
Foundry: Sheffield, Ala. **489**
Four New Books to Help You Know Your World. June, 866-870
Fox, Harry 703
Fox, Margaret and Kate 710; House: Builder of replica 710, 712, **713**
France: Celtic heritage 600, 607, 611, 616, 617, 619, 626; Name origin 619; *see also* Mont Saint Michel
Francis, Patricia **717**
Franciscan missions: Huichols 841, 845, 846, 850, school 846, **850**
Franklin, Aretha 188
Franklin, Benjamin 168
Franks (people) 619
Frazier, Joe 196
Freeville, N.Y.: Spiritualist camp **712-713**
French, Gladys **714**
French Canadians: Maine 733; *see also* Quebec (province)
French explorers: Ohio River 248
French Revolution: Monasteries 828, 829
Frenchman Bay, Maine 753
Frescoes: Jaipur, India **224**
Freshwater king rail **175**
Friday Harbor, San Juan Island, Wash. 95, 96
Friendship Academy of Folklore, Waldoboro, Maine 751
Frigatebirds: Florida **685,** cover ill.
Frisbees: Malaysian native **655**
Froidevaux, Yves-Marie 826
Front de Libération du Québec (FLQ) 464
Frontier Corps (Pakistan) 111, 122, 127, 136
Fruit fly: Electron micrographs **277**
Funerary objects: Boat, Egyptian **296, 297;** Celts 589, **590-591,** 606
Fungi: Red mangrove leaf decay 678
Furniture making: Maine **732**

G

GCMS *see* Gas chromatograph mass spectrometer
GEX *see* Gas exchange
G. H. Bass & Co., Wilton, Maine: Moccasin manufacture **737**
Gaelic (language) 617, 619, 621, 630
Gageng (Ilongot) 373
Galatians 588, 600
Gallagher, Don 737
Galli 588
Gallia Academy, Gallipolis, Ohio: Band from, in park **255**
Gallipolis, Ohio: Park **254-255**
Galway, Ireland 619
Galway Bay, Ireland 629
Ga-Maloka, South Africa 815
El-Gamasy, Mohamed 319
Games: Bingo 450, **463;** Checkers **204-205;** Paddleball **342;** *pétanque* 444; *see also* Sports
Gandhi, Mohandas (Mohatma): South Africa 804; Street mural depicting **186**
Garam Chashma, Pakistan 133
Gargano, Monte, Italy: Shrine of St. Michael 823, 826
Garroway, Dave 722
Garvey, Marcus 181
Gas, natural *see* Natural gas
Gas chromatograph: Viking missions equipment 16, 23
Gas chromatograph mass spectrometer: Viking missions equipment 24
Gas exchange (GEX): Viking missions experiment 23, 24, diagram **16**
Gaskin, Stephen 492
Gaspé, Quebec: Assimilation of Anglophones 446, 448
Gaspé Peninsula, Quebec 446; Fishing industry **450-451;** Tourism 451
Gauls *see* Celts
Gavilla, Andrés 48
Geb (Egyptian god) **301**
Geese: Greater snow geese, dead **452**
Geetersloh, Arthur **734**
Gemmules **399**
General stores: Alabama **466-467,** 467; Arkansas **356-357**
Geneva, N.Y. 712-713; College students 713, **717;** Porch **722-723**
The Gentle Yamis of Orchid Island. A picture story by Chang Shu-hua. Jan., 98-109
George Town, Malaysia *see* Pinang (city)
Georgia: Moonshine drinker **486;** Walk through 488
Gerald, Earl of Kildare 627
German immigrants: Cincinnati 257
Getafix (comic strip character) 632
Gezira (island), Cairo, Egypt 317
Ghost town: Rush, Ark. 359
Gibbon, John 414, 426, **429**
Gibraltar: Arrival of balloon gondola **216-217**
Gilbert, Ark.: Barn near **354;** General store and post office **356-357**
Giraffe: South Africa **809**
Girga, Egypt 322
Giza, Egypt: Pyramids 296, 312, **312, 314,** 340, age 312
Glacial formations: Finger Lakes region, N.Y. 704, 708; Maine 753
Glasgow, Scotland: Unemployment 530, 535
Glass industry: Corning, N.Y. 708, 724, **724**
Goat: Pakistan **116**
"God's eyes" **837,** 840
Golconda of Victory Fort, Jaipur, India 220
Gold: Art objects: Celtic **600,** 606, **607,** Egyptian **304-306,** Thracian 606; Electron microscope uses 278-279; South Africa 786, 794, 796, 806, 819, coins **796**
Gold mines: Philippines 376-377, 380; South Africa: Dormitory **796-797**

UMI

Golden Triangle, Pittsburgh **246-247**
Good Hope, Cape of, South Africa 804; History 785, 797
Gore, Rick: ***The Search for Life.*** Jan., 9-31; ***Striking It Rich in the North Sea.*** Apr., 519-549; ***The Tree Nobody Liked.*** May, 669-689
Goscinny, René 632
Gothic architecture: Mont Saint Michel **824-825,** 826, 827, 828
Gould, John 751
Grace, "Daddy" 181
Grace de Leon, Helen 385
Graffiti: Harlem **186**
Graham, Edward 156
Grahame, Kenneth 8
Grail legends: Celtic origin 588
Grand Cayman Island: Sponges **401**
Grand Prix of the United States: Watkins Glen, N.Y. 719, 722
La Grande Rivière, Canada: Dam 460
Grangemouth, Scotland: Oil refinery **538;** Ruins **539**
Granite: Maine 728, 751
Grant, Ulysses S. 418
Gränz, Óli 695
Grapes: New York 708, 718, 719, harvest **714-715;** South Africa 805, 808, **811**
Graves, William: ***Puget Sound, Sea Gate of the Pacific Northwest.*** Jan., 71-97
Gray, Alexander **767**
Great auk: Audubon painting **162**
Great blue herons 166, 175
Great Britain: Economic impact of oil 521, 524, 532, 538; Parliament 531, 532, 539; *see also* British; England; Scotland; Wales
Great Elephant Roundup (Malaysia) 658
Great Glen, Scotland 760, 765, 769, 778; Map 762
Great gray owl: Audubon painting **150**
Great Indian Desert, Rajasthan 219, 220
Great Ohio River Flatboat Race 157, **270-271**
Great Pyramid of Giza, Egypt 296
Great Spirit Chief 409, 420, 431
Great Trek (South Africa) 785, 804
"Great Wall of India" **221**
Great white heron **175;** Florida Keys 675
Greeley, Horace 710
Green, Stephen 76
Greene, David 627
Greenville, Maine 731; Logging near **734**
Greer, Ronald 779
Gregan, "Reddy" and Faye 731
Grimes, Tiny **200**
Grinnell, G.B. 140, 142
Grobler, Frans 808, 811, **816**
Groningen Province, Netherlands: Natural-gas field 525
Grove, Noel: ***Vestmannaeyjar: Up From the Ashes.*** May, 690-701
Groves, Lisa Sue **257**
Gudnason, Hjálmar 701
Guevara, Che 37, **47**
Guitars: Huichols **834**
Gulf of Suez Petroleum Company 319
Gum: Spruce 734
Gundestrup caldron **582-583,** 606, **612-613,** 621
Guns: Ball-point pen, 25-caliber **135;** Moros 387, **388;** Pathans **110,** 117, 120, 126, 133, **135,** 138
Gunsmiths: Darra, Pakistan 126, **134**
Gurkhas: Conquests 505
Gutiérrez, Orlando 48
Gyrfalcon: Audubon painting **151**

H

Halfmoon, Richard 431-432
Hall, Alice J.: ***Legacy of a Dazzling Past*** (ancient Egypt). Mar., 292-311
Hall, Bob **70**
The Hallowed Isle, Mont Saint Michel. By Kenneth MacLeish. June, 820-831
Halloween: Origin 581, 625-626
Hallstatt, Austria: Celts 588-589, 606
Hallstatt period (Celtic culture) 589, 590, 606
Halophytes: Defined 678; *see also* Red mangroves
Hamamatsu, Japan: ***Japan's Warriors of the Wind.*** Photos by David Alan Harvey. Apr., 551-561
Hammondsport, N.Y. 718, 719
Harbison, Peter 626
Harborow, Peter 524
Harlem (district), New York, N.Y. 147; ***To Live in Harlem. . . .*** By Frank Hercules. Feb., 178-207
  Aerial view **182-183**
  Black Muslims **190-191**
  Blacks, migration of 185, 187
  Children **178-179, 188-189,** 201
  Churches 182, **198-199,** 202, 206; Role of 199, 204
  Citizens, famous 181, **181,** 182, 187, 188, **191,** 195-196, **197,** 199, 201, 205-206
  Crime 180, 182, 189, 195
  Decline of 182, 184, 187, 206
  Drugs 178, 180, 189, 191, 193, 195, 201, 204; Rally against **194**
  Education, quality of 180
  Entertainment 182, 195, 196; Jazz 184, 196, 201, guitarist **200;** Performing arts 188, 193, **200-201**
  Ethnic groups 187
  Gambling 180, 193
  Geographical boundaries 187
  History **180-181,** 182, 184, 185, 187
  Hospitals 180; Demonstration **202-203, 207**
  Housing 178, 185, 189, 195; Brownstones 178, **182-183,** interior **184-185;** Tenements 178, **186,** 195, 204
  Humor 182, 187, 206
  Microcosm of human condition 178, 206
  Middle class 178, 182; Exodus 185
  Name origin 185
  Police 180, 187, 193, **194-195,** 195
  Politics 203, 204, 206; Politicians 187, **197,** 199, 205-206
  Population, declining 178
  Poverty 182, 187, 193, 204
  Racism 191, 201; Seminar to combat **194-195**
  Reconstruction 178, 186
  Restaurants 187, **200**
  Spirit 182, 187, 204, 206
  Sports **192,** 195-196
  Street life **178-179, 188-189, 198-199, 204-205;** Mural **186;** Rally **194**
  Unemployment 178
  Welfare 178
  Whites 184, 185
Harlem Hospital, Harlem 180
Harlem River, New York 185,187
Harlem School of the Arts 188
Harold the Saxon 827
Harrania, Egypt: Weavers **335**
Harris Hill, Elmira, N.Y. 723
Harrod, Dominic 524, 530
Harvester (machine): The Farm, Tenn. **482;** Finger Lakes region, N.Y. **714-715;** Wheeled: Origin 588
Harvey, David Alan 655; photographer: ***Japan's Warriors of the Wind.*** Apr., 551-561; ***Malaysia: Youthful Nation With Growing Pains.*** May, 635-667; ***Puget Sound, Sea Gate of the Pacific Northwest.*** Jan., 71-97
Hashish: Pakistan **122,** 130
Haskell, Stanley 757
Hastings, battle of 827
Hathor (Egyptian goddess) **295,** 309
Havana, Cuba: ***Inside Cuba Today.*** By Fred Ward. Jan., 32-69
Havell, Robert, Jr. 151, 167; Print by **164**
Haying: North Carolina **476-477**
Head-hunting: Celts 597, 600, 603, 606; Ibans 652, 654-655; Ilongots 372, 378
Heald, Eric 670, 675, 678, 679
Heath, Malcolm 96-97
Heath, Wallace 92
Heaven-on-the-Hudson, N.Y. 182
Hedgehog: Faience statue **301**
Heimaey, Iceland: Christian shrine, first 695; Coastline change 693, 694, map 694; Fishing village *see* Vestmannaeyjar, *outlined;* Fumaroles 693; Map 694; Population 693, 698; Seabirds 698, 699, 701; Volcanoes *see* Eldfell; Helgafell
Helgadóttir, Kristín 698
Helgafell (dormant volcano), Iceland 693, **695**
Helium: Field ion microscope use 281
Helium balloon *see Silver Fox*

Hellgrammite (dobson fly larva) **565**
Helmets: Bronze and iron **592;** Rattan **108;** Silver **109**
Helvetia 588
Helvetii (Celtic tribe) 588, 603, 607
Hemlock seedlings **85**
Henderson, Eva Barnes **348-349,** 351, 355-356
Henderson, Ky. 157, 158
Hendrix, Rose Cefalu 678-679
Henry, Isabel 535, 538
Hercules, Frank 147; ***To Live in Harlem. . . .*** Feb., 178-207
Heret-Webkhet, Lady **301**
Herma Ness, Unst, Shetland Islands: Seabird colony 543-544
Hermansen, Gudni 693, 698
Hermit crabs: Red mangrove habitat 675, **680**
Herodotus 312
Heroin: Pakistani opium 130
Heroin addicts: Harlem 193, 195
Herons: Great blue 166, 175; Great white **175,** 675
Herrick, Francis Hobart 158
Hess, Seymour 26
Heyward, DuBose 184
Hiawatha 709
Hieroglyphs, Egyptian **293, 298-299, 301-303, 305-311**
Highland games: Drumnadrochit, Scotland **764**
Highlands, Scotland: Economic stagnation 535; Oil impact 521, 524, **527, 528-529,** 530-532, **533,** 535, 538
Hilario (Huichol shaman) 832, 836
Hill, Tom **419**
Himalayas *see* Dolpo, Nepal
Himes, Louis Carroll 245, 250, 252, 253, 267, 270
Hindu Kush (mountains), Asia 113, 114, 130, 133
Hinduism: Malaysia **659;** Rajasthan, India 225, 229
Hinmahtooyahlatkekht *see* Joseph, Chief
Hippopotamus: Faience statue **301**
Hiser, David, photographer: ***A Way of Life Called Maine.*** June, 727-757
History, ancient *see* Celts; Egypt, ancient
Histria, Romania 606-607
Hobart College, Geneva, N.Y. 713; Graduate **717**
Hockey, ice: Quebec, Canada 438, **454-455**
Hockey teams: Montreal Canadiens 438
Holava, Stanley, and family 250, **250**
Holiday, Billie 196
Holy Week celebrations: Huichols **842,** 849; Philippines **374-375**
Homesteaders: Northwest, U. S. 418, 420
Homeworkers Organized for More Employment (H.O.M.E.) 752; Founder **749,** 752; Worker **749**
Honduras: Sponges **392-393, 395, 396, 400-401, 403**
Honeybee: Electron micrograph **282**
Hood Canal, Wash. **81**
Hooper, Thomas E., photographer: ***Probing the Mystery of the Medicine Wheels.*** Jan., 140-146
Horemheb (pharaoh): Tomb **306**
Horne, Lena 195
Horowitz, Norman 12, 23, 26
Horse races: Celts **586-587;** Nepal 508, 510, 513
Horsemen: Nepal **513;** Washington Indian rodeo **421**
Horses 413, 414, 415, 416-417, 423, 428, 430, 432; Appaloosas 415, **416-417, 423,** 426; Piow horse **481;** Quarter horse **485;** Selective breeding 415, 416; White horse **354**
Horseshoes: Celtic invention 588, 601
Horus (Egyptian god) **294,** 295; Eye of **299;** Gold statue **300**
House christenings: Orchid Island 104
House moving: Philippines **382-383**
Houseboats: Seattle area 79
Howard, Oliver Otis 413, 414, 415, 420, 423, 428
Howard Doris Limited: Oil platform constructed by **528-529,** 532, 535
Hoyte, Lenon Holder **185**
Hrap Gompa, Nepal 508; Lama 508, 510
Hrauney (island), Iceland: Puffin catching 701
Hubbard, Harlan and Anna **260**
Hudson, Marshall 723, 724
Hudson's Bay Company: Quebec, Canada 460
Hughes, Langston: Quoted 182, 206
Hugo, Victor: Quoted 278
Huguenots, French: South Africa 785, 797, 805
Huichol Indians: ***The Huichols, Mexico's People of Myth and Magic.*** By James Norman. June, 832-853
  Agriculture 836, 850, **850, 851,** 852; Crops 836; Education 845, 850
  Arts and crafts **844, 845,** 853, cover ill.
  Character 832, 840, 850
  Christianity 832, 841, 843, 845, 846
  Dress, traditional 832, **833, 837, 838, 839, 842, 843, 848-849, 850, 852-853**
  Education 836, 845, 846, 850; School **850**
  Foods, traditional 840-841, **848-849**
  Government 836, 843, 846, 849; Jury **834-835**
  Mexican government and 832, 845-846, 850, 852
  Peyote 836, 839, **839,** 840, 843, 852; Capture of 836, 841
  Religion 832, 836, 846; Deities 836, 840, 841, 849; Exorcism **846-847;** Pilgrimages 836, **838,** 849; Rites 836, **837,** 839, 840-841; *see also* Christianity; Peyote, *above;* Shamans, *below*
  Shamans 832, 836, **837,** 839, 840, 841, 846, **846-847,** 849, 853; Apprenticeship 836; Pouch 832, 836
Hukbalahap (Huks) 381, 384; Former leader 384
Hull, Canada: Outdoor concert 464
Hultzman, Jack 724
Human sacrifices: Celts **598-599,** 601, 606, 625
Humphreys, Ken 530
Hunter, Alan **773**
Hunter, Albert and Lena 543
Hunters: Mindanao, Philippines **390;** Nez Perce 415, 416, 419, 423, 427; Quebec, Canada **452-453**
Hunting: Birds 152, 155, 156, 157, 158, 162, 165, 168, 171, 172, 173, **452-453;** Buffalo 423, 427
Huntington, W. Va. 253
Hussein, Kamal Ed-Din 333
Hussein bin Onn, Datuk 651, 666
Hydesville, N.Y.: Fox house: Builder of replica 710, 712, **713**
Hydro-Quebec: Canada 449-450, 460, 462
Hydroelectricity: Columbia River, U. S. 420; Egypt 332, 336; Quebec, Canada 449-450, 456, 459, 460
Hydrozoans: Decorator crab camouflage **683**

I

Ibans (people) 652, **654-655;** Headhunting 652, 654-655
Ibises: White ibis 678, **684**
Ice Age: Finger Lakes region, N.Y. 708
Ice-canoe races: Quebec (city), Canada **454-455**
Ice fishing: Sainte-Anne-de-la-Pérade, Canada **456-457**
Icelandic Village Reborn From Fire and Ash. By Noel Grove. May, 690-701
Iceni (Celtic tribe) 601
Idaho: ***Chief Joseph.*** By William Albert Allard. Mar., 409-434
Ifugao (tribesmen): Luzon, Philippines 363
Île aux Grues, Quebec: Snow-goose hunters 444, **452-453**
Illinois: ***Heartland Shaped by an Icy Plow.*** Feb. supplement; Ohio River area 245, 270, 271, **272-273,** 273
Illuminated manuscripts: *Book of Kells* 606, 620, **620,** making of **621;** Psalter of St. Columba 626-627
Iloilo, Philippines 385
Ilongots (Philippine tribe) 372-373,

378-379
Imbolc (Celtic festival) 624-625
Immigrants: Ohio Valley 249-250, 257
Impalas: South Africa 796, **809**
In Peril of the Sea (mount) *see* Mont Saint Michel
India: "Great Wall of India" 220, **221**; *see also* Rajasthan
Indian Pond, Maine 733, **733**
Indian reservations: Idaho 418, 431; Maine 734; Washington **70,** 92, 409, **410-411,** 432, 434
Indian wars *see* Nez Perce War
Indiana: ***Heartland Shaped by an Icy Plow.*** Feb. supplement; Ohio River area **262-265,** 263, 266, 270
Indians of North America: Arkansas: Archeological site 359; Maine 730, 733, 734, 737, 740, 741, **742,** 753; New York 709, 710; Puget Sound region **70,** 78, 83, 88, **88,** 92-93; Quebec, Canada 459, 460; *see also* Huichols; Medicine wheels; Nez Perce
Indus (river), Asia 114
Inert gases: Martian atmosphere 26
Inishmaan (island), Aran Islands 629-630
Inishmore (island), Aran Islands: Fort, prehistoric **622-623**
Inoucdjouac, Quebec, Canada 460
Insects: Bluebird diet **854, 856,** 858, 859, 865, **865; *Unseen Life of a Mountain Stream.*** By William H. Amos. Apr., 562-580
Inside Cuba Today. By Fred Ward. Jan., 32-69
Instituto Nacional Indigenista, Mexico 845
Internal Security Act: South Africa 813
Inuit Eskimos: Quebec, Canada 459, 460, 461
Inverness, Scotland 759, 778; Shop window **765**
Iona (island), Scotland 626
Ipi, Fakir of 138
Ipuia: Portrait, bas-relief **302**
Ireland: Celtic heritage 581, 617, 619, 621, 622-623, 624-627, 629-630; Artwork **620;** Fort (ruins) **622-623;** Gaelic (language) 617, 619, 621, 630; History 619, 621, 627, 630; King, ritual sacrifice of **598-599;** Legends **624-625,** 627, 629; Monks **621,** 626, 627, 629, 630
Iridium atoms: Micrograph **281**
Iron: Celts 581, 588, 590, 592, 601, 611
Iron Age: ***The Celts.*** By Merle Severy. May, 582-633
Iron ore: Quebec, Canada 438, 455-456, 459
Iron Ore Company of Canada, Quebec 455-456
Ironwoods (trees): Malaysia 636
Iroquois federation 709, 710
Irrigation: Egypt 316, 318, 322, **328,** 332, 336-337, 340; India 222, **242-243;** Pakistan 136; South Africa 794
Isaacson, Michael S. 278
Isabela, Philippines: Peace rally 387, 391
Iseult: Celtic legend 588
Islam: Egypt 316, 317, 320, 326-327; Harlem 191; Malaysia 640, 643, 656; Pakistan 114, 122, 133, 139; Philippines 387, 389, 391
Islam, World Community of, in the West: Members **190-191**
Ismailia, Egypt 318; Suburb 318, **320-321**
Israel: Oil 319; Suez Canal occupation 320; Wars with Egypt 317, 318, 320, 325, 327
Ithaca, N.Y. 722
Ius Chasma (canyon), Mars **28-29**
Ibujivik, Canada 460

J

Jacinto (Huichol shaman) 840
Jacobite Rebellion (1745) 621
Jaigarh (Victory Fort), Jaipur, India 220
Jaipur, Rajasthan 220, **234-235;** Forts 220; Religious frescoes **224**
Jaisalmer, Rajasthan **226-227;** Population 226; Wedding **236**
James Robison Crusade: Revival **494-495,** 495, 497-498
Jandola, Pakistan 111, 136
Japan's Warriors of the Wind. Photos by David Alan Harvey. Apr., 551-561
Japanese: Malaysia 637, 651; Orchid Island 99, 108; Philippines 380, 381, **381,** 384, 389
Jazz: Harlem 184, 196, 201
Jean-Baptiste, Saint 450-451
Jeepneys: Manila **360-361,** 361
Jeffery, David: ***Audubon "On the Wing."*** Feb., 149-177
Jemimakins (sect) 708
Jenkins, Peter Gorton **467, 469, 471, 475, 476, 492, 499;** Family **475; *A Walk Across America.*** Apr., 466-499
Jenkins, Scott 470, 472, 484; Photo by **469**
Jenness, Delphine 252
Jennies (JN trainer airplanes) 719
Jerome, Saint 600
Jet Propulsion Laboratory, Pasadena, Calif. *see* Viking missions
Jirga (Pathan council) 117, 120, 122, 126
Joffroy, René 589, 590
Johannesburg, South Africa: Founding 806; Gold mine dormitory **796-797;** Suburbs, black *see* Soweto; University **806-807**
John the Baptist, Saint 450-451
Johnsen, Ingibjörg 698
Johnson, Bertie, and wife **542**
Johnson, Theodore 742, 745
Johor, Malaysia: Sultan 638
Jolo (island), Philippines: Construction **388-389**
Jones, Raymond 205, 206
Joseph, Chief: ***Chief Joseph.*** By William Albert Allard. Mar., 409-434
  Band 411, 413, 415, 418; Remnants of 420, 432
  Brother 415, **418,** 420, 428
  Death 409, 410, 431
  Eloquence 411, 413 414
  Exile 410, 431
  Father 413, 415, 418
  Grave 409, 410, 419
  Indian name 409
  Land, love of 413
  Peacefulness 411, 418, 420, 423, 430
  Photographs **408, 429**
  Quoted 409, 413, 415, 418, 420, 423, 424, 429, 430, 431, 433
  Religion 431
  Statesman 420
  Warrior 414, 420
  Wife, death of 426
Judith Basin, Mont. 428
Julien, Pauline **460**
June Bug (biplane) 718, 719; Facsimile **718-719,** 719
Jupiter-Amun, temple of, Siwa, Egypt 337

K

Kafirs (tribespeople) 133; Child **133**
Kalaji (Bhil god) 233
Kallue, Ata-ur-Rahman 127, 129
Kampong Tekek, Malaysia 651
Kansas: Nez Perce imprisonment 430-431
Karmøy (island), Norway: Farm **547**
Katahdin, Mount, Maine 731, 734, **740-741**
Kaunda, Kenneth 787
Káuyúmarie (Huichol deity) 836
Kayaks: Buffalo National River 347, 350
Keane, Charlie 470
Kearny, Father Joseph 629, 630
Keats, George 158
Keats, John: Quoted 158
Kehoe, Tom and Alice 146
Keith, Scotland: Service station **533**
Kelten 585
Keltoi 585
Kennebec River, Maine 731, 745; Log drive **735**
Kennebunkport Dump, Maine: Parade **736**
Kennedy, Billy 778
Kentucky: ***Heartland Shaped by an Icy Plow.*** Feb. supplement; Ohio River area 254, **256-257, 260-261,** 266, **266,** 267, **268-269,** 270, 271, 272; Woodlands **174**
Kenyatta, Charles 201-202
Kerau Game Reserve, Malaysia: Elephants **638**
Keuka Lake, N.Y. 703, **706-707,** 708, 716
Key deer: Red mangrove habitat **687**

Khan, Inayatullah 136
Khan, Jalat 136
Khan, Maider 120
Kharga Oasis, Egypt: Artesian well **329;** Tomb, Christian 337
Khyber Pass, Pakistan 117, **124-125;** Caravan route 226
Kieffer, Hugh 11
Killifish: Crab eating **680-681**
Kimberley, South Africa: Diamonds 796
Kimsey, Mary 357; Children 357, 359
Kinabalu, Mount, Malaysia 651
King, Martin Luther, Jr. 495; Street mural depicting **186**
King, Noel 522
King rail, freshwater **175**
King William's Town, South Africa: Health care for blacks **805**
Kinta River Valley, Malaysia: Tin, panning for **667**
Kipling, Rudyard: Pakistan 120, 125; Quoted 120, 129
Kirkjufell (volcano), Heimaey, Iceland 693-694 *see also* Eldfell
Kishorn, Loch, Scotland: Oil impact **528-529,** 532
"Kishorn Monster" (oil platform) **528-529,** 532, 535; Diagram **529**
Kitchen band: Yates County, N.Y. 716
Kite festivals: ***Japan's Warriors of the Wind.*** Photos by David Alan Harvey. Text by John Eliot. Apr., 551-561; Malaysia 660
Kites, flying: Puget Sound ferry **73,** 76, 78; *see also* Kite festivals
Kittery, Maine 745, 757; Bridge 727, 757
Kittinger, Joseph W., Jr. 213, 217
Klein, Harold 12, 23, 24, 26
Klein, Martin 773
Knights: Origin 606
Knives: Diamond 278, inventor 279; Gold dagger **305**
Know Your World (1977-78 book series). June, 866-870
Knox, George 733
Koartac, Quebec 461
Koh-i-noor diamond 129
Kopser, "Poughkeepsie Joe" 709
Kothari, Komal 220
kothis (silos): Bikaner, Rajasthan **238-239**
Krater, bronze: Celtic burial mound 589, 590
Krishna (Hindu deity) 225
Kristinsdóttir, Didda 698
Kristjánsdóttir, Sólveig **697**
Kristof, Emory **774;** photographer: ***Loch Ness: The Lake and the Legend.*** June, 759-779
Kruger National Park, South Africa 796, **808-809**
Krugerrands (coins): South Africa **796**
Krypton (gas): Martian atmosphere 26
Kuala Lumpur, Malaysia 638, 643; Aerial view **640-641;** Chinatown **642,** 663, 666; Founding 653; Riots (1969) 641, 648-649; Tin mine 657
Kuala Terengganu, Malaysia 648
Kumbha, Rana 220
Kunga (Nepalese) 500, 507
Kvilhaugsvik, John **546, 547**
KwaZulu (homeland), South Africa 801, 815; Map 787
Kyger Creek power plant, Cheshire, Ohio 253
Kyles, Oscar **467**

L

LG2 (dam), La Grande Rivière, Canada 460
Labeled release (LR): Viking missions experiment 23, 24; Diagram **15**
LaCase, Verdell "Casey" 731
La Conner, Wash.: Fisherman on pier **73**
Lafleur, Guy 438
Lai, Rita 662
Lakes *see* Finger Lakes
Laki (volcano), Iceland: 1783 eruption 697
Lallgarh Palace, Bikaner, India **222-223;** Wedding **236**
Lamson, Joseph, and family 263, 266
Lan Yü *see* Orchid Island
Landi Kotal, Pakistan 117, 120
Landsat: Nile river space photo **332**
Lansing, N.Y.: Salt mine 722-723
Lapwai, Idaho, reservation 423, 431
La Tène period (Celtic culture) 590, 600-601, 603, 619; Archeological site: Switzerland 590, 601, 603
La Tuque, Canada 450
Laurel, Mont. 428
Laurenson, Charles, and family 539, **540-541**
Lava, as heat source 695, 697
Laval, Bishop de 444
Lavies, Bianca, photographer: ***The Tree Nobody Liked.*** May, 669-689
Lavik, Håkon 547
Lavilles, Servando 384-385
Lawang (Nepalese) 508
Lawarai Pass, Pakistan 133
Lawyer, Leemon **199**
Lean Elk (Nez Perce) 420, 427, 428
Leask, Walter 538-539
Lee, Ann 742
Lee, Gentry 10, 25, 26
Leeuwenhoek, Anton van 26, 278
Legacy of a Dazzling Past (ancient Egypt). By Alice J. Hall. Mar., 293-311
Le Goarnic family 626
Lemon leaf: Aphids eating **276-277**
Lenses, magnetic: Electron microscopes 278, 280, 281
Leopard-head ornament, gold **306**
Lesotho: Independence 787; Labor pool for South Africa 787, 788, 796
Leukemia research: Sponges 407
Lévesque, René 438, **441,** 456, 459, 464
Levin, Gilbert 23, 24, 26
Lewis, Meriwether 415, 416-417
Lewis and Clark Expedition 413; Route, map locating 414
Lewiston, Maine: Population 730, Franco-American 733
Leyte (island), Philippines: History 384
Licorish, David 204-206
Lightning: Tampa, Fla. **870**
Little Bighorn, Battle of the 428
Littlehales, Bates, photographer: ***Audubon "On the Wing."*** Feb., 149-177
Live oaks: Mobile, Ala. 495, **496-497**
Liverpool, England 167
Livy (Roman historian): Celts 606
Lizars, W. H. 167
Llandudno, South Africa 805
Lloyd, Frank, Jr., and family **474-475,** 487-488
Lobstering: Boats 728-729; Maine 728-729, 757
Loch Ness monster 626; ***Loch Ness: The Lake and the Legend.*** By William S. Ellis. June, 759-779
  Food supply 772, 779
  Length 763, 768, 772
  Nickname 765, 769
  Painting of **770-771**
  Photographs of 762, 763, **768-769, 770,** 772
  St. Columba and 759, 761
  Search for **758,** 759, 769, 770, 772, **774-775, 776-777;** Diagrams **762, 774**
  Sightings 759, 762, 763, 767, 773, 778
  Theories 767, 768, 769, 770, 772, 777
Lochcarron, Scotland: Oil impact 532, 535
Lochend, Scotland **760-761**
Lockheed HC-130 (rescue plane): Balloon assistance 217
Locks, canal: Caledonian Canal, Scotland **765;** Ohio River 248, 263, 266-267, diagram **249,** map 248-249
Log cabins: Maine 733, **733;** San Juan Island, Wash. **94**
Log drives: Maine 731, 733, **735,** outlawed 734
Logan, Adelphena 709
Logging: Maine 731, 733, **734, 735;** Philippines 385-386; *see also* Timber industry
Lolo Pass, Idaho-Mont. 423
Lolo Trail 423; Map locating 414
Londinium (Roman London): Burned by Celts 601, 614
Long, Michael E.: ***Consider the Sponge.*** Mar., 392-407
The Longest Manned Balloon Flight. By Ed Yost. Feb., 208-217
Longfellow, Henry Wadsworth: Quoted 750
Longfellow Mountains, Maine 741

UMI

Longhouses: Ibans 652, **654-655**
Looking Glass (Nez Perce leader) 420, **423**, 427, 428, 434; Death: Site marker **430**
Loom, back-strap **844**
López, Alfredo 38, 51
López, Juan 840
Lostmans River, Fla. 679
Louis, Joe 196, 201
Louisville, Ky. 156-157, 166, 248, 266, 267, **268-269**, 270
Lourdes-de-Blanc-Sablon, Quebec 455
Lovett, Joe 629-630
Low-altitude balloon flight *see Silver Fox*
Lowell Observatory, Flagstaff, Ariz.: Mars photos **21**
Lowlands, Scotland: Oil refinery **538**; Pasture **530-531**; Unemployment 530, 535
Lugh (Celtic god) 627
Lughnasa (Celtic festival) 627, 629
Lumholtz, Carl 836, 850
Lummi Indians: Fish ranch **70**, 92; Number of 92; Reservation 92
Lummi Island, Wash.: Fishermen **82-83**
Lutes: Himalayan **505**, 512
Lutkho River, Pakistan 133
Lutkhowah (dialect) 130, 133
Luxor, Egypt: Mural **326-327**
Luzon (island), Philippines 364, 368, 387; Concentration camps 380; Fishponds **376-377**; Tribes 363, 372-373, **378**, **379**; U.S. military installations 391; *see also* Manila
Lynette, Bob 86
Lynx, Canada: Audubon painting **161**
Lyons, N.Y.: Speakeasy 713

M

Mabley, Jackie "Moms" 182
McAlpine Locks and Dam, Ohio River 266
Macarthur, Allan 535
MacArthur, Douglas 380
McCall, Carl 187, **197**
McCrillis, Dean 742
McDonald, Dave 543
McElroy, Michael 11, 12
Machismo: Cuba 40; Philippines 364, 384, 389
McKean (destroyer): Ceremony aboard **81**
McKenzie, Gordon **775**
McLaren, Sophy **784**
MacLeish, Kenneth: ***Mont Saint Michel***. June, 820-831
McMaster, Ellen 723
MacMathúna, Dolly 629
MacNeill, Máire 627
Mactan (island), Philippines: History 384; House moving **382-383**
Madison, Ind. **264-265**
Madonna (statue): Vestmannaeyjar, Iceland **692**, **693**
Magellan, Ferdinand: Philippines 365, 384
Magis, Robert C., artist: ***The Celts***. May, 582-633
Magnetic lenses: Electron microscopes 278, 280, 281
Magsaysay, Ramon 381
Mahimbya (tribespeople): Angola **816-817**
Mahmoud, Fathi Abdullah **328**
Mahogany, Philippine 386
Mahsud (tribe): Pakistan 136
Maiden Castle, Dorchester, England **592**
Mail boats: Finger Lakes, N.Y. **706**, 709
Maine: ***A Way of Life Called Maine***. By Ethel A. Starbird. June, 727-757
  Accent 731
  Beach **738-739**
  Character 730, 731, 741, 745, 757
  Economy 727, 730, 731, 737, 739, 745, 747, 752; Employment 752
  Environmental concerns 727, 734, 737
  Facts and figures 730
  Farming 741, 746-747; Crops: Blueberries 740-741, **742**, potatoes 730, 737, 741, **743**, 754; Dairy cattle **746-747**
  Fishing 730, 731, 737, 745; Clamming **750-751**; Lobstering 728-729, 757; Mussels 748
  Flag **730**
  Forests 730, 731, 754
  History 731, 733, 737, 755; Settlers 745; Statehood 730
  Indians 733, 740, 741, **742**, 753; Land claim 730, 734, 737; Reservations 734
  Industry 741, 752; Leather **737**, 752; Pulp and paper 731, 734; Shipbuilding 745
  Islands 727, **728-729**, 745, 750, 753, **753**, 757
  Lakes and ponds **733**, **740-741**, 741; Number of 731
  Logging 731, 733, **734**, **735**
  Map 730
  Minerals and mining 741; Tourmaline 741-742
  Motto 730
  Newcomers 727, **732**, 747, 757
  Population 730; Geographic distribution 745; Increase in 727, 747
  Ports 733, 737, **743**, 745, **750-751**
  Poverty 737, 752
  Rivers 731, **735**, **740**
  Shaker community 742, **744**, 745
  Tourism 728, 730, 731, 739, 745, 751
  Wilderness 731
Maine, Gulf of 745
Maine Sea Coast Missionary Society: Minister 757
Maine Seafoods Festival: Rockland, Maine 748
Mainland (island), Shetland Islands 539, 540, 541, **542**, 543, **545**
Majorette: Alabama **491**
Majorville medicine wheel, Alberta, Canada 146
Makati, Philippines 364, 368
Makati Stock Exchange, Philippines 364, **369**
Malacañang (palace), Manila 368
Malacca, Malaysia *see* Melaka
Malacca, Strait of 662
Malamute, Alaskan 470; Son *see* Cooper Half Malamute
Malaria Eradication Program (Malaysia) 652
Malay Peninsula *see* Malaysia
Malayan Communist Party 638, 643
Malays (people): Malaysia 637, 641, **646**, 647, 648, 649, 658, **660**, 666; South Africa 797, 802
Malaysia: Youthful Nation With Growing Pains. By William S. Ellis. May, 635-667
  Agriculture **634-635**, 636, 638, 643, 647, 653, 658, 663; Subsistence 647, 651, 653
  Capital *see* Kuala Lumpur
  Character of people 658, 666
  Chinese 635, 636-637, 638, 641, **642**, **643**, 647, 648-649, 651, 653, 657, 658, 662, 663, 666; Financial control 643, 647, 649, 657
  Economy 640, 643, 647, 653
  Exports 643, 647, 653, 656, 658, 663, 666
  Facts and figures 640
  Flag **640**
  Free-trade zones 656, 662-663
  Government 638, 657, 666; King 638, 640, 643; Prime Minister 651, 666
  Headhunting 652, 654-655
  History 637, 638, 640, 643, 648-649, 651, 652, 653, 656, 662
  Indians 643, **643**, **645**, 647
  Insurgents 635, 636-637, 643, 653, 666
  Malays 641, **646**, 647, **660**; Favored status 637, 647, 648, 649, 658, 666
  Map 640-641
  Natural resources 635, 636, 640, 643, 651, 652, 653, 657, 666
  Oil 643, 651, 652, 657
  Palm oil 638, 643, 657, 658
  Population 637, 640
  Racial tensions 635, 637, 641, 647, 648-649
  Rain forests 635, **636-637**, 643, 651
  Religions 640, 662; Buddhism **650**, 651; Hinduism **659**; Islam 643, 656
  Rubber 635, 640, 643, 653, 656; Research 653; Trees **634-635**, 647, 653, 658
  Timber 636, 643, 647, 651, 653
  Tin 635, 641, 643, 653, 656, 666; Mining 653, 657; Panning for **667**; Production 657
  Wildlife 635-636, **638**, **639**, 651, 657-658
Malaysian Palm Oil Producers Association 658
Malaysian Rubber Research and

UM

- Development Board 653
- Malcolm X: Bodyguard 201; Poster of **191**
- Malin, Rachel 703
- Mamat bin Dollah 663
- Man-o'-war birds *see* Frigatebirds
- Manana Island, Maine: Hermit 757
- Manching, Bavaria 601
- Mandela, Nelson 789
- Mandela, Winnie **791**
- Mangrove snappers (fish) **672-673,** 675, **681**
- Mangroves 678; *see also* Red mangroves
- *Manifestations* (ballet) **200-201**
- Manila, Philippines: ***The Philippines: Better Days Still Elude an Old Friend.*** By Don Moser. Mar., 360-391
  - Aerial view **366-367**
  - Construction 366-367
  - Cultural center 369, **372-373**
  - Curfew 371; Violators **371**
  - Governor of metropolitan area 370, 372
  - Jeepneys **360-361,** 361
  - Parks 361, **366-367**
  - Population 365
  - Poverty: Squatters 364, 367
  - Press 369, 391
  - Religious procession **374**
  - Violence 364
- Manila Bay, Philippines 361, 364, **366-367,** 368, **372-373,** 380; Fort **380**
- Manitoba (province), Canada: Bluebird trail, world's longest 865, map 859
- Maple leaves: Virginia **478**
- Maps:
  - Buffalo National River, Ark. 350-351
  - Cuba 34-35; U. S. Naval Station, Guantánamo Bay 35
  - Dolpo, Nepal 505
  - Egypt 316
  - Europe: Celtic languages today 617; *Europe* and *Celtic Europe*, May supplement
  - Everglades region, Fla. 671
  - Finger Lakes region, N.Y. 710
  - France, locating Mont Saint Michel 822
  - Great Glen, Scotland 762
  - Heimaey, Iceland 695
  - Illinois: *Close-up: U.S.A., Illinois, Indiana, Ohio, and Kentucky,* Feb. supplement
  - India, locating Rajasthan 219
  - Indiana: *Close-up: U.S.A., Illinois, Indiana, Ohio, and Kentucky,* Feb. supplement
  - Kentucky: *Close-up: U.S.A., Illinois, Indiana, Ohio, and Kentucky,* Feb. supplement
  - Maine 730
  - Malaysia 640-641
  - Mars, locating Vikings 13
  - Mexico: Sierra Madre Occidental: Huichol areas 841
  - Ness, Loch, Scotland 762
  - North America: Bluebird ranges 859
  - North Sea 525
  - North-West Frontier Province, Pakistan 114
  - Northwest (region), U. S.: Nez Perce retreat 414-415
  - Ohio: *Close-up: U.S.A., Illinois, Indiana, Ohio, and Kentucky,* Feb. supplement
  - Ohio River 248-249
  - Orchid Island located 103
  - Philippines 365
  - Puget Sound, Wash. 72
  - Quebec (province), Canada 440
  - South Africa 786-787
  - United States: *Close-up: U.S.A.* series: *Illinois, Indiana, Ohio, and Kentucky,* Feb. supplement; East: Peter Gorton Jenkins's walk 469
- *mara'akámes* (shamans) 832, 836, **837,** 839, 840, 841, 846, **846-847,** 849, 853
- Marco Island, Fla.: Development halted by red mangroves 670, **670,** 682, 686
- Marcos, Ferdinand 361, 366-367, 368-369, 370, **371,** 372, 384, 391
- Marcos, Imelda 369, **370,** 372
- Margonelli, David 733
- Margonelli, Susan **732**
- Marietta, Ohio 252
- Marijuana leaf: Electron micrograph **284-285**
- Marineworm industry: Maine 748
- Markets: Pakistan 129, **132;** Seattle, Wash. **96-97**
- Markham, "Pigmeat" 182
- Marquesas Keys, Fla.: Frigatebirds **685,** cover ill.
- Marriages, trial: Yamis 104
- Mars 1; ***Mars: Our First Close Look.*** Jan., 3-31: I—***As Viking Sees It.*** 3-7; II—***The Search for Life.*** By Rick Gore. 9-31
  - Age 26
  - Atmosphere 9, 11, 12, 26; Diagram **22;** Inert gases 26; Tides 22, 26
  - Canyons 9, **28-29;** Diagrams **22, 28**
  - Clouds **3,** 11, **28-29**
  - Conjunction 25
  - Craters **3,** 9, 10, 11, **22, 27, 31**
  - Crust 25; Diagram **22**
  - Dust 10, 11, 12, **20;** Storms **21,** 26
  - Floods, possible ancient 9, 27
  - Fog 3, 11, **22**
  - Ice 9, 11, 12, 22, **30**
  - Life on: Importance of 26; Possible 11, 12, 24-25; Tests for 8, 14, 18-19, 23, 24-25, diagram **15-16**
  - Map, locating Vikings 13
  - Meteorites 11, 27
  - Moons 26, **27;** Origin, possible 26, 27
  - Permafrost 11, 12, 27, 31
  - Polar caps **3,** 11, **21, 30**
  - Riverbeds, possible ancient 9, 11, 12
  - Rocks **2-3, 7,** 10, **14-16,** 15, **17-21;** Volcanic **4-5, 8**
  - Sky, color of **2-3, 6-7,** 11, **17-19**
  - Soil 10-11, **18-21,** 24, 25
  - Temperature range 11, 16
  - Ultraviolet radiation 8, 11, 12, 22, 24, 25
  - Volcanoes 9, **28-29;** Diagrams **22, 28**
  - Volume 22
  - Water 9, 11-12, 22, 25, 27, 31 *see also* Ice, *above*
  - Weather 26; Dust storms **21,** 26
  - Year 26
- Marsquakes, search for 25, 28
- Martin, James 10
- Marwat, Akhtar Munir 122
- Marxism: Africa 786-787, 811
- Mason, Joseph 158, 165, 166
- Master, Manny 678
- Masursky, Harold 12
- Mata Torres, Ramón 845
- Matanzas Province, Cuba: Sugarcane harvesting **54, 55**
- Matanzima, Kaiser 815
- Matinicus Island, Maine 757
- Matsûa (Huichol) 849, 853
- Maxwell, Stephen 532
- May Day: Celtic Festival 581, 625; Cuba 32, **32-33**
- Maya 868, **868,** 870; Ruins **869**
- Mayflies **565;** Nymphs **564,** 579, 580
- Maynor, Dorothy 188
- Mayo (county), Ireland: Pilgrimages 627, **628, 629**
- Mays, Willie 195, 196
- Maysville, Ky. 254
- Meade, Joseph, Jr. 719
- Mecca, Saudi Arabia: Pilgrimages to 326
- Medicinal plants 868, **868-869**
- Medicine lodges: Cheyennes 140, 142, 144
- Medicine wheels: ***Probing the Mystery of the Medicine Wheels.*** By John A. Eddy. Jan., 140-146
- Medina, Saudi Arabia: Pilgrimages to 327
- Meer, Fatima **791**
- Meidum, Pyramid of, El Faiyum, Egypt **341**
- Melaka, Malaysia 662
- Memorial Day ceremonies **419**
- Mensun Sungit **663**
- Mercury Aircraft: *June Bug* recreation 719
- Merrihue, Bill 670
- *La Merveille,* Mont Saint Michel **824-825,** 826, 827
- Meryet (Egyptian): Tomb **298-299**
- ***Mexico's People of Myth and Magic*** (Huichols). By James Norman. June, 832-853
- Michael, Saint 822, 826; Cult 826, 827; Painting **820;** Shrines 823, 826 *see also* Mont Saint Michel
- Micmac Indian **742**
- Microperiscope, tubular 570
- Microscopes: Diagram **280;** History 26, 278; Magnification limits 278, graph **280-281;** Principle 280, diagram **280;** *see also* Electron microscopes
- Midges 675; Larvae **569,** 579; *see also* Net-winged midge

UMI

Midland, Pa. 249; Serbian Christmas 250, **250**
Midsummer Eve (Celtic celebration) 582, 584
MIG-21 (jet): Egypt 322
Milbridge, Maine: Balloon launch 208, **208, 209,** 212
Miles, Nelson "Bear Coat" 415, 419, 428, 430
Mill Grove (farm), Pa. 155, 156, 167
Millan, Howard 93
Miller, George W. 187
Miller's thumb (mottled sculpin) **564, 566, 580**
Mills, steel, and mill towns: Ohio River 245, 249, 250, **251**
Milton, Ky.: Home interior near **260-261**
Mindanao (island), Philippines 385-387, 389, 391; Earthquake 391; Hunter **390;** Logging 385-386; Natural resources 385, 391
Mines and mining: Asbestos 460, 462; Gold 376-377, 380, dormitory **796-797;** Nickel 53, 58, **58-59;** Salt 589, 722-723; Tin 653, 657; Zinc 351, 359
Mingo Junction, Ohio **251**
Minks 470, **566**
Miquelots (pilgrims) 827
Miram Shah, Pakistan 136, 138; Caravan passing **118-119**
Mirror, bronze: Celtic **614**
Les Miserables (Hugo): Quoted 278
Misgaran Bazaar, Peshawar, Pakistan 129
Missiles, surface-to-air: Egypt **325**
Missionaries: Huichols 832, 841, 845, 846
Mississippi River, U.S.: Ohio River's confluence with 245, 248, 271, **272-273**
Mit Kinana, Egypt 333
Mitchell, Arthur 201
Mitchell, Mount, N.C. **472-473,** 484
Mites: Water mites **568, 569**
Moa, Cuba: Nickel industry 53, 58
Mobile, Ala. 495, **496-499;** Revival meeting **494-495,** 495, 497-498
Moccasin, making of **737**
Mockingbirds: Audubon painting **153**
Moguls: Rajasthan, invasion of 220
Mohammed, Zal 133
Mohawk Indians 709
Mohmands (tribe) 122, 126
Molete, Elijah 815
Molete, Kelly 800, 815
Monasteries: Ireland **621,** 626, 627, 630; *see also* Mont Saint Michel
Mongoose: Bronze statue **301**
Mongstad, Norway: Oil refinery **548-549**
Monhegan Island, Maine 731, 757
Monogram, illuminated: *Book of Kells* **620**
Monongahela River, Pa.-W. Va. **246-247,** 248
Monsoons: India 220, **230-231,** 240; Malaysia **644-645**
"Monster Burger" wagon: Loch Ness, Scotland **771,** 778
Mont Lassois, France: Celtic fort 589
Mont Saint Michel. By Kenneth MacLeish. June, 820-831
Mont Saint Michel, Bay of: Shrimp nets **828-829;** Tides 822, 823, 827, 828
Montana: ***Chief Joseph.*** By William Albert Allard. Mar., 409-434
Montesdeoca, Mirna **49**
Montgolfier, Etienne 212
Montgomery, Ala.: State Capitol 493, 495; Young woman **485**
Montreal, Quebec: Bingo **463,** tax 463; Murals, outdoor 461, **465;** Population 440, 446; Restaurants 461; Window washers **446-447**
Montreal Canadiens (hockey team) 438
Moonshine: Georgia man drinking **486**
Moose, bull **741**
Moose Mountain Medicine Wheel, Saskatchewan, Canada **145,** 146; Diagram **144**
Moose River, Maine: Campsite **740**
Moosehead Lake, Maine 731, 734
Morales, Rubén 48, **52**
Morania #6 (tugboat) 709
Moreland, Mrs. Guyla 271, 273
Morin, Michel **530**
Mormons: Palmyra, N.Y. 708
Moro Gulf, Philippines: Tsunamis 391
Moros 387, **388,** 389, 391
Moser, Don: ***The Philippines: Better Days Still Elude an Old Friend.*** Mar., 360-391
Mosque: Sheikh Zayid City, Egypt **321**
Mosquito fish: Shrimp eating **681**
Mosquitoes: Electron micrograph **287**
Moss, Michael **94**
Mossbank, Shetland Islands: Oil impact 539, 543
Mosses: Water moss **563, 569,** 573, 576
Mount Adams, Cincinnati **258-259**
Mount Desert Island, Maine **752-753,** 753, 757; Fire 753; Jesuit mission 733
Mount Liberty Baptist Church, N.C. 488
Mount Zion Baptist Church, N.C. 488
Mountain bluebird 858, 865, **865;** Range map 859
Mountain stream *see* Stark Brook
Moustafa, Adel 336-337
Mozambique: Independence 786, 787; Labor pool for South Africa 787, 788, 796; Marxism 787, 811
Mtshali, Oswald Joseph 803
Muhammad (prophet): Tomb, painting of **326-327**
Muhammed Ali (Egyptian) 343
Mujica, René 37
Mullagoris (tribe) 122
Müller, Erwin W. 281
Murals, outdoor: Harlem **186;** Luxor, Egypt **326-327;** Montreal 461, **465**
Murphy, Ella **723**
Murphy, Kevin 778
Murphy, N.C. **474-477,** 487-488
Murphy High School, Murphy, N.C.: Graduate **475**
Musicians: Dolpo, Nepal **505,** 512; Huichols **834, 837, 842, 843;** Kentucky **257, 260;** Rajasthan **218**
Muskmelons: Pakistan 136
Muslims: Egypt 316, 317, 320, 326-327; India 220; Malaysia 640, 643, **656;** Pakistan 122, 133, 139, 144; Philippines 365, 387, **388,** 389, 391
Muslims, Black **190-191**
Mussels: Maine 748
Mustache, coiled **218**
Mustapha bin Datu Harun, Tun Datu Haji 651
Mutch, Thomas 10
Mycerinus (pharaoh) 295; Statue **295**
Myers, Edward A. 748
Mystery of the Medicine Wheels. By John A. Eddy. Jan., 140-146

N

Nag Hammadi, Egypt: Aluminum industry 322, 336, worker **323**
Nahargarh (Tiger Fort), Jaipur, India 220
Nákawé (Huichol deity) 840
Namibia: Independence promised 786, 811; Insurgents 816
Nang-Khong river, Nepal 508
Nang-Khong valley, Nepal 508, 510
Narmer (pharaoh) 295; Carving of **294**
Nash (island), Maine 757
Nasipit, Philippines 385
Nasipit Lumber Company 385
Nasr City, Egypt 318
Nasser, Gamal Abdel 317, 333
Nasser, Lake, Egypt 316, 332, 336, 340
Natashquan, Quebec 451, 455; Field near **448-449**
Natchez, Miss. 165
Nath, Gulab 220
National Aeronautics and Space Administration *see* Viking missions
National Air Pollution Control Administration 252
National Audubon Society 168
NATIONAL GEOGRAPHIC:
  Editorials 1, 147, 291, 435, 581, 725
  Loch Ness monster search team 762, 765, 769, 772, 774-775
National Geographic Society (NGS):

UM

Custom equipment shop 576
Expeditions and research: Stratosphere flights 212-213
Flag 208, **209**, cover ill.
Grants: Medicine wheel research 141, 144, 146; Transatlantic balloon flight 208
National Hockey League teams: Quebec, Canada 438, 454
National Institutes of Health, Bethesda, Md.: Electron microscopy 288-289
National Park Service 347; Buffalo National River, plans for 356-357; Rangers 352, 357, 359
National Party (South Africa) 725, 788
National rivers *see* Buffalo National River, Ark.
National Wild and Scenic Rivers System, U. S. 351
Natural gas: North Sea 519, 521-522, 525, pipeline **530;** Ohio Valley 250, 252
Ncome River, South Africa 804
Neby (Egyptian): Portrait, bas-relief **302**
Nee Me Poo *see* Nez Perce
Nefertari (Egyptian queen): Statues **308-309**
Nefertiti (Egyptian queen): Bust **292**
Neff, Jack 484
Negroes *see* Blacks
Negros (island), Philippines 384-385
Nemausus (Celtic god) 619
Nepal *see* Dolpo, Nepal
Nespelem, Wash. 432; Cemetery 409, **419**
Ness, Loch, Scotland: ***Loch Ness: The Lake and the Legend.*** By William S. Ellis. June, 759-779
  Aerial view **760-761**
  Bottom 762, 769
  Depth 762, 769
  Fish 763, 772, **775, 779**
  Length 760, 778
  Map 762
  Monster *see* Loch Ness monster
  Stone circles 772, **773**
  Tourism 761, 765, 771, 778
  Width 769
Ness, River, Scotland **761,** 767
Nessie *see* Loch Ness monster
Net-winged midges 570, 573; Larvae 573, **576;** Pupae **565, 571**
Netherlands: Natural-gas field 525, map 525
Neto, Agostinho 786
Neuchâtel, Lake, Switzerland: Celts 590, 601, 603
New England: Finger Lakes settlers from 708; *see also* Maine
New Microscopes Reveal an Invisible World. By Kenneth F. Weaver. Feb., 274-290
New Orleans, La. 149, 158, 165
New People's Army (NPA): Philippines 381, 384
New Quebec (region), Canada 459-461
"New Society": Philippines 368, 369, 384
New Tribes Mission: Philippines 372
New Valley, Egypt 337, 340; Artesian wells **329,** 337
New York *see* Finger Lakes region
New York, N.Y. 166, 167, 168 *see also* Harlem
New York Historical Society 159
New York Public Library: Schomburg Collection 187
New York State Barge Canal System 709
Newbie, Marion **712**
Newman, Kenneth 168
Newry Hill, Maine: Tourmaline mine 742
Nez Perce Indians: ***Chief Joseph.*** By William Albert Allard. Mar., 409-434
  Bands 411, 414, 415, 418, 419, 420
  Burial rites **410-411,** 426-427
  Courage 409, 414, 429
  Creation, legendary 409
  Earth, reverence for 409, 431
  Exile 411, 415, 419, 427, 431
  Flight 413, 423, 426, 427, 428; Map 414-415
  Horses 413, 414, 415, 416-417, 423, **423,** 426, 428, 432; Confiscated 430
  Hunting 415, 416; Buffalo 419, 423, 427
  Leaders 411, 413, 414, 418, **418,** 420, **423,** 427, 428, 431 *see also* Joseph, Chief, *outlined*
  Legends 409
  Name origin 409
  Peacefulness 413, 414, 423
  Present-day: Discrimination 431; Education 431-432; Unemployment 431
  Religion 431
  Reservations 409, **410-411,** 418, 431, 432, 434; Map locating 414-415
  Trade 416, 423
  Tradition, importance of 431, 432, 434
  Treaties 414, 418
  Tribal lands 409, 410, 413, 414, 415, 418, 420; Former **424-425**
  War *see* Nez Perce War
  Warriors 411, 414, 415, 418, **418, 419,** 420, 426, 427, 428, **429**
Nez Perce War 409, 410, 427, 432, 434; Battles 413, 423, 426, 428, map locating 414-415; Losses 414, 423, 426, 428; Surrender of Nez Perce 414, 415, 428, 430, 431
Ngawa (tribe): Horseman **513**
Nicaro, Cuba: Nickel industry 58, plant **59**
Nicholas, Joseph A. 734
Nicholson, Donald **766**
Nickel industry: Cuba 53, mine **58-59,** plant **59**
Nicolson, Torquil 535
Nieuw Haarlem 185
Nigg Bay, Scotland: Oil impact 530
Nile (river), Egypt 312, 317; Flooding, annual 316, 337; Space photo **332;** Water use 316, 318, 320, **328,** 336
Nile Delta, Egypt 317, 333, 336; Space photo **332**
Nilosyrtis region, Mars **31**
Nîmes, France: Name origin 619
Ninian field, North Sea 529
Nirvana (yawl) **752-753**
Nisqually-Puyallup Indian leader **88**
Nitrogen: Martian atmosphere 11, 22
Noah's Ark (Huichol yarn painting) June cover ill.
Nomads: Nepal 500, 506, **506, 507,** 508; Pakistan **116-119, 138-139**
Nondweni (township), South Africa 780; Zulu relocation **801**
Nongauza, Beauty **805**
Norman, James: ***The Huichols, Mexico's People of Myth and Magic.*** June, 832-853
North Carolina: Walker's tour of **472-477,** 484, **486,** 487-488
North River, Fla.: Red mangroves 670
North Sea oil: ***Striking It Rich in the North Sea.*** By Rick Gore. Apr., 519-549
  Blowout, fear of 544
  Casualties 522, 524, 537
  Diving 524, **536,** 537; Equipment 524, **536, 537,** 549
  Drilling rigs 521, 522, 524, 539, 544
  Economic impact 521, 524, 530-531, 532, 535, 538, 539-541, 543, 547, 548-549
  Expenditures 519, 524, 537
  Fields, oil and gas **518-519,** 519, 521, 522, 524, 525, 529, **534, 536-537,** 538, 543, 544, **546,** 548-549; Map 525
  Fisheries affected by 531, 541, 544, 547; Spawning grounds 544
  Foreign workers **518,** 522, **526-527,** 527, **530,** 531, 532, 535, 543, 544, 547
  National rights 525; British sector 519, 521-522, 524, 529, 530, 531-532, 538, 539; Dutch sector 525; Norwegian sector **518-519,** 522, 524, **534, 536-537,** 544, 548-549
  Natural gas 519, 521-522, 525, 544; Pipeline **530**
  Oil: Major strike 525; Reserves 519, 525
  Pipelines, oil and gas 519, 521; Accidents 524, 544; Factory 535; Landfalls 530, 539, 540, 543, 547, 549; Laying 522, 524, **530;** Length 521, 522; Map 525
  Platforms 519, 521, **534, 536-537,** 539, **546,** 549; Construction **520, 528-529,** 535, 538, 544, diagram **521,** firms 522, 529, 530, 532, 535; Crew 521,

    - 522, 537, 539, **546;** Dangers 521, 524, 535, 537; Transport 521, **522-523,** 529
  - Port facilities 522, 526, 535, 539, 540, **542,** 543, 544
  - Social impact 521, **526-527,** 530-532, 535, 540-541, 543, 544, 548, 549
  - Weather conditions 519, 521, 524, 535, 537
- North Waziristan (district), Pakistan 136
- North-West Frontier Province, Pakistan: ***An Eye for an Eye: Pakistan's Wild Frontier.*** By Mike W. Edwards. Jan., 111-139
  - Area 114
  - Capital *see* Peshawar
  - Climate 114, 116
  - Education 114, 138
  - Farms and farming **112-113,** 127, 130, 136, **137;** Crops 117, 127, 130, 136, opium **123,** 129-130
  - Firearms **110,** 117, 120, 126, 133, **135,** 138
  - Government: Local 117, 120, 122, 126, 130; Pakistani 114, 122, 126, 130, 136, 139
  - History 111, 114, 120, 122, 126, 129, 130, 136, 138
  - Irrigation 136
  - Location 111, 114
  - Map 114
  - Modernization 114, 122, 138, 139
  - Mountains 111, 113, 114, 117, **124-125,** 129, 130, **137**
  - Population 114
  - Roads 111, 114, 117, 120, 122, **124-127,** 130, 135, 136, 138
  - Smuggling 114, 120, 122
  - Tribesmen *see* Pathans, *outlined*
- North Woods, Maine 731
- *Northern* (towboat) 245, 252; Crew **244,** 250, 252, 253, 256, 267, 270, 273
- Northern water thrush **564**
- Norton, Eleanor Holmes 187
- Norway 547-548, 549; Oil *see* Ekofisk; Oil impact: Economic 521, **526,** 544, 547, 548-549, social **526-527,** 548
- Norway, Maine: Snowshoe factory 741
- Nouveau-Québec (region), Canada 459-461
- Nowshera, Pakistan 129
- Nqutu, South Africa 789; Farm burning near **816-817**
- Nuclear-fuel processing plants: Ohio River 253, 264, 271
- Nuevitas, Cuba: Fertilizer plant **59**
- Numbers game: Harlem 180, 193
- Nutt, Wayne 522

O

- Oak Hills, Ohio 261
- Oakley (plantation), La. 165-166
- Oaks: Alabama **485,** live oaks 495, **496-497**
- Oases: Egypt 322, 328, **330-331,** 337
- Obelix (comic strip character) 632, **632-633**
- Odum, William 670
- Official Language Act (1974), Quebec, Canada 446, 461
- Offshore drilling *see* North Sea oil
- Oga (Nepalese) 500, 507, 508, 512, 517
- Ohio: ***Heartland Shaped by an Icy Plow.*** Feb. supplement
- Ohio River and basin, U. S.: ***The Ohio—River With a Job to Do.*** By Priit J. Vesilind. Feb., 245-273
  - Confluence with Mississippi 245, 248, 271, **272-273**
  - Dams *see* Locks and dams, *below*
  - Ethnic groups 249-250, **250,** 257
  - Farming 254, **262-263,** 263, 267, 272
  - Fish 248, 272, 273
  - Floods and flood control 270-271
  - Freight transported 245, 248, 252, 254
  - History 248, 249-250, 254, 256, 257, 266, 270, 271; Boat traffic 248, 252, 257, 263, 269, 270
  - Industry 245, 248, 249, 250, **251,** 252, 253, 257, 267, 271
  - Length 245, 248
  - Locks and dams 248, 263, 266-267; Diagram **249;** Map 248-249
  - Map 248-249
  - Origin **246-247,** 248
  - Pollution 245, 252; New standards 245, 248, 263, 264
  - Population 248
  - Revival: Economy 248, 252, 271, 272; Pollution control 245, 248, 263; Urban riverfront redevelopment 245, 258-259, 261, 267, **269,** 270
  - Size of basin 248
- Ohio River Company: Coal terminal 253
- Ohio River Valley Water Sanitation Commission (ORSANCO) 263
- Oil: Egypt 317, 318-319; Malaysia 643, 651, 652, 657; *see also* North Sea oil
- Oil palms: Malaysia 636, 638, 647, 658
- Oil refineries: Maine: Proposed 737; Norway **548-549;** Puget Sound region 76, 79, 86; Scotland 535, **538**
- Oil spills: Puget Sound 76, 79, 82-83, threat 86, 92
- Okanogan River, Canada-U. S. **421**
- Oklahoma 430
- Old Fitzgerald Distillery, Louisville, Ky. 267, **268**
- Old Orchard Beach, Maine **738-739**
- The Old Print Shop, New York, N.Y. 168
- Old Shawneetown, Ill. 270
- Old Town, Maine 734
- Olives: Egypt 322, 331
- Ollokot (Nez Perce) 415, **418,** 420, 428; Wife, death of 426
- Oltuski, Enrique 37, 58-59
- Olympic Mountains, Wash. 71, 82
- Olympus Mons (volcano), Mars 9, **28-29;** Diagram **28**
- ***Omens for a Better Tomorrow*** (Egypt). By Thomas J. Abercrombie. Mar., 312-343
- ***One Canada—or Two?*** (Quebec). By Peter T. White. Apr., 436-465
- Oneida Indians 709
- Onondaga Indians 709
- Ontario, Lake, Canada-U. S.: Satellite image **710-711**
- Open-pit mining: Malaysia 653, 657
- Opium: Pakistan 122, 129-130, harvest **123**
- Oppenheimer, Harry **791,** 818
- Oppida **592,** 607, 611
- Orange River, South Africa: Dam **794**
- Orangutans: Malaysia 638, **639,** 651
- Orchid Island: ***The Gentle Yamis of Orchid Island.*** A picture story by Chang Shuhua. Jan., 98-109
- Orchids: Malaysia 651; Orchid Island 99
- Ord, George 166, 167, 168
- Ordóñez, Cosme 51
- Oregon: ***Chief Joseph.*** By William Albert Allard. Mar., 409-434
- Oriente Province, Cuba 36, 42; Nickel industry 53, 58, **58-59**
- Orkney Islands, Scotland: Pipeline accident 524
- Orland, Maine: Cooperative 749, 752
- *Ornithological Biography* (Audubon) 152
- ORSANCO (Ohio River Valley Water Sanitation Commission) 263
- Oscula 392-393, **392-393, 395, 396, 398, 402**
- Óskarsdóttir, Eygló 699
- Osman, Osman Ahmed 318
- Oulad Ali (tribespeople): Woman **331**
- Our Elder Brother (Huichol deity) 836
- Our Father Sun (Huichol deity) 840, 849
- Our Grandfather Fire (Huichol deity) 836, 840, 841
- Our Grandmother Life (Huichol deity) 840
- Owasco Lake, N.Y. **704-705,** 708, 709
- Owls: Barred **724;** Great gray **150**
- Oxidation: Life process 23, 24
- Oxygen: Brook life 572; Martian atmosphere 12
- Oyama, Vance 23
- Oyster bars: Red mangrove foundations **674,** 675, 678, 679
- Ozark National Forest, Ark. 347; Maps 350, 351
- Ozark Plateau, Ark.-Mo. *see* Buffalo National River, Ark.

Ozark Society 351, 352

P

P. K. le Roux Dam, Orange River, South Africa **794**
PQ *see* Parti Québécois
PR *see* Pyrolitic release
P-12 early-warning radar: Egypt 322
Pacific Islands *see* Orchid Island
Pacific Northwest *see* Puget Sound
Paddleball: Alexandria, Egypt **342**
Paducah, Ky. 271
The Pageant of Rajasthan. By Raghubir Singh. Feb., 219-243
Pahang (state), Malaysia: Elephants 657-658; Sultan 638
Paintings: ***Audubon "On the Wing."*** By David Jeffery. Feb., 149-177
Pakistan's Wild Frontier. By Mike W. Edwards. Jan., 111-139
Palm oil: Malaysia 638, 643, 657, 658; Uses 638, 658
Palm wine 385
Palmyra, N.Y. 708-709, **720-721**
Panay (island), Philippines 385
Papia Kristang, Malaysia 662
Papyrus: Fragments **295, 300-301**
Parades: Cohocton, N.Y. **703;** Cushing, Maine 751; Hamamatzu, Japan **553;** Kennebunkport Dump, Maine **736;** Terrebonne, Canada 451
Parakeets, Carolina: Audubon painting **152**
Paris, France: Name origin 588
Parisii (Celtic tribe) 588
Park, city: Gallipolis, Ohio **254-255**
Parks, Gordon **181**
Parks, Winfield 435, photographer: ***One Canada—or Two?*** Apr., 436-465
Parks, national: South Africa 794, 796, **808-809**
Parti Québécois (PQ) 435, 437, 456, 459, 463, 464; Victory celebration **441**, 464
Parula warbler **177**
Passamaquoddy Indians 734, 737
Passamaquoddy project 737
Passenger pigeons 158; Audubon painting **163**
Paterson, Basil 187
Pathans (tribespeople): ***An Eye for an Eye: Pakistan's Wild Frontier.*** By Mike W. Edwards. Jan., 111-139
  Code of honor 114, 117, 120, 122, 126-127, 135, 136
  Diet 120, 136
  Drug trafficking 122, 129-130
  Feuds 113, 120, 122, 135, 138
  Firearms **110,** 117, 120, 126, 133, **135,** 138; Gunsmiths 126, **134**
  Hospitality 120, 135, 136
  Livelihoods 120, 122, **126-128,** 133
  Motor vehicles 120, **121, 126-127**
  Name origin 114
  Nomads **116-119, 138-139**
  Religions 114, 127, 132, 138, 139
  Shepherds **131,** 133
  Trade 114, 120, 122, 124, 127, 129, 133
  Tribes 117, 120, 122, 126-127, 130, 133, 136, 138
  Women 114, **116,** 120, **133,** 139
Paton, Alan **791,** 811, 812-814
Patrick, Saint: Ireland 627, 629
Patton, Robert S., photographer: ***Vestmannaeyjar: Up From the Ashes.*** May, 690-701
Paul, Saint: Epistle to Galatians 588
Payne Hollow (Hubbard): Quoted 261
Peanut vendor: Riverfront Stadium, Cincinnati **253,** 261
Peat cutters: Shetland Islands **540-541**
Pekan, Malaysia: Top fighting **660**
Pelicans **172;** Red mangrove habitat 679, 688, **688-689**
Pelletier, Mrs. Abel **451**
Penland, N.C. 484
Penn Yan, N.Y. 712, 716
Pennsylvania: Ohio River area 245, **246-247,** 248, 249, 250, **250;** Walk through 470
Penobscot (river), Maine 731
Penobscot Bay, Maine 728, 753
Penobscot County, Maine: Abandoned house **746-747**
Penobscot Indians 734
Peopeo Tholekt **418**
Peoria, Ill.: Steamboat 269
Pepper plants: Sarawak 643
Percé, Quebec 446
Perea Corral, Jesús and Lisette **45**
Peregrine falcons: Audubon painting **152;** Sapsucker Woods, Cornell University 722
Pereida, Mariano 846
Perrin, Al 716
Peshawar, Pakistan: Age 127; Bazaars 129; Buses **126-127;** Fire truck, antique **121;** History 129
Peshawar, Vale of, Pakistan **124-125**
Peterhead, Scotland: Oil impact 530-531
Peterson, Phil 709
Peterson, Roger Tory 168
Petroleum *see* Oil
Pewter vases: Malaysia **666**
Peyote: Effects of 836, 839; Huichols 836, 839, 840, 841, 843, 852, harvest 836, **839**
Pharaohs 293, 295, 296, 303, **305-307;** Statues **294-296, 308-309**
Phelps, N.Y. 712
Philadelphia, Pa. 155, 166, 167
Philae, Egypt: Temples 336
Philippine Cultural center, Manila 369, **372-373**
Philippine mahogany 386
Philippines, Republic of the: ***The Philippines: Better Days Still Elude an Old Friend.*** By Don Moser. Mar., 360-391
  Anti-Americanism 364, 391
  Capital *see* Manila, *outlined*
  Crime, war against 364, 369, 384
  Economy 365, 368, 369
  Facts and figures 365
  Farming 368, 384-385; Crops **362-363,** 373, 384, 385
  Fishing **379,** 387; Fishponds **376-377**
  Flag **365**
  Government 368, 369, 370; Democracy, decline of 361, 368, 371, 391; Nepotism 372; Oligarchies 368, 369; Opposition to 368, 369 *see also* Guerrilla activity, *below;* Secessionist movement, *below*
  Guerrilla activity 361, 381, 384, 387, 389, 391
  History 364, 365, 368, 380-381, 384, 387; Independence 365, 368; Occupation: Japanese 380-381, 389, Spanish 364, 365, 368, 374, 387, 389, U. S. 364, 365, 368
  Industry **368**
  Islands, number of 364
  Land reform 369, 384-385
  Language 364, 365
  Logging 385-386
  Map 365
  Martial law 361, 364, 368-369, 371
  Mining 377; Gold 376-377, 380
  Nationalism 368, 391
  Natural resources 377, 385, 387, 391
  "New Society" 368, 369, 384
  Population 364, 365; Family planning 385
  Poverty 368; Squatters 364, 367
  President *see* Marcos, Ferdinand
  Religion 365, 386; Christian 369, 372, 378, 387, Holy Week celebrations **374, 375;** Muslim 387, 389, 391
  Secessionist movement 368-369, 387, 389
  Tribes 363, 372-373, **378, 379**
Phillips, Derwin 261
Phillips, Rudy 270
Phillips Petroleum *see* Ekofisk complex
Philpott, James 250
Phobos (Martian moon) 26, **27**
Phoenix: Window hanging **334-335**
Photography, bird: Dummy camera **860-861;** Stationary rig **862**
Photography, microscope: ***Electronic Voyage Through an Invisible World.*** By Kenneth F. Weaver. Feb., 274-290
Photography, underwater: ***Unseen Life of a Mountain Stream.*** By William H. Amos. Apr., 562-580
Phycomycetes (fungi) 678
Picasso, Pablo: Drawing by **607**
Piccard, Don 213
Pieter, Ben **811**
Pigeons, passenger 158; Audubon painting **163**
Pigs, Bay of, Cuba: Invasion 1, 37,

UMI

- 65, museum **64-65**
- Pigs: Barbecued 250, **250;** Hair searing **105;** Raffle of **462-463**
- Pilgrimages: Celts 619, 627, **628,** 629, **629;** Huichols 836, **838,** 849; Muslims 326-327; ***Pilgrimage to Nepal's Crystal Mountain.*** By Joel F. Ziskin. Apr., 500-517; *see also* Mont Saint Michel
- Pilipino (language) 364, 365, 382
- Pilsdon Pen, England: Chariot races **586-587**
- Pinang (city), Malaysia 662; Aerial view **656-657;** Free-trade zone 656, 662-663
- Pinang (island), Malaysia: Tourism 662
- Pinar del Rio Province, Cuba: Tobacco 48, **52-53, 62-63**
- Pineda, Arsenio 385-386
- Pines, Isle of, Cuba 37, 43
- Pink shrimp: Florida **680, 681,** 686-687; Life cycle 681, 686-687
- Pipelines *see* North Sea oil
- Pirrie, Eliza 165
- Pirrie family 165, 166
- Pitcher plant: Malaysia 651
- Pittsburgh, Pa.: Ohio River's origin 245, **246-247,** 248
- Pittston Company: Eastport, Maine, project 737
- Place Royale, Quebec, Canada: Archeological dig **442,** 444
- Plains Indians 142-143, 146
- Plan Huicot (Mexico) 845, 850
- Planets *see* Mars
- "plantimal" **280**
- Plants, medicinal 868, **868-869**
- Platforms: Offshore drilling *see* North Sea oil
- Pleasant Valley Wine Company, Hammondsport, N. Y. 718, 719
- Plesiosaurs: Loch Ness monster theory 769, 770, 772
- Plowing: The Farm, Tenn. **480-481;** Huichols **851**
- Plowshare, iron: Celts 588
- Poitier, Sidney 195
- Polaris submarine **81**
- Police: Harlem 180, 187, 193, 195, sensitivity training **194-195**
- Pollen: Electron micrographs **290**
- Pollution *see* Air pollution; Chemical pollution; Water pollution
- Polo (game): Chitral, Pakistan 130, 133
- Polygamy: India 233
- Pony, Tibetan: Nepal **513**
- Popotita, Mexico: Huichol shaman 853
- Poppies, opium: Pakistan **123,** 129-130; Turkey **868-869**
- Population shifts: Latin America 56
- Port-Alfred, Quebec: Pulpwood **458-459**
- Port-Cartier, Quebec: Pulp industry 456
- Port-Nouveau-Québec, Quebec 460
- Portland, Maine 745, **750-751**
- Portuguese: Malaysia 662
- Posidonius (Greek historian): Celts 601
- Post offices: Gilbert, Ark. **357**
- Potatoes: Maine 730, 737, 741, **743,** 754
- Poulin, Lucy **749,** 752
- Povungnituk, Quebec 460
- Powell, Adam Clayton, Jr. 199, 201, 205-206; Boulevard named for 187
- Power plants: Ohio Valley 252-253, **265**
- *powindahs* (Pathan nomads) **116-119, 138-139**
- Pratap, Maharana 220
- Prather, Victor A., Jr. 213
- Prayer flags: Nepal 510, 512
- Prayer meeting: Alabama high-school football team **491**
- Pretoria, South Africa 796; Administrative capital 783, 786
- Prison camp: Orchid Island 103
- ***Probing the Mystery of the Medicine Wheels.*** By John A. Eddy. Jan., 140-146
- Progressive Reform Party (South Africa) 790
- Prohibition: New York 713, 719
- Protozoans 576
- Prudhoe Bay, Alaska, oil field: Supplies for 76, 79
- Psalter of St. Columba 626-627
- Puffins: Iceland 698, 699, 701; Shetland Islands **541,** 544
- Puget, Peter 78
- Puget Sound region, Wash.: ***Puget Sound, Sea Gate of the Pacific Northwest.*** By William Graves. Jan., 71-97
  - Aircraft industry 71, 78, 83, 86, **86, 87**
  - Aquiculture **70,** 71, 92
  - Area 71
  - Environmental problems 76, 93; Oil spills 76, 79, 82-83, 86, 92
  - Ferry system 72, **73,** 76, 78, 95
  - Fishing, commercial 76, **82-83, 88-89,** 92-93
  - Geologic origin 71, 72
  - History 72, 78, 79
  - Indians **70, 88;** Fish ranch **70,** 92; Fishing rights 83, 88, 92-93; History 78, 93
  - Map 72
  - Mountains 71, **74,** 82, 83, 85, 93
  - Population 72, 76
  - Recession (1960's) 78, 86
  - Recreation; sports 71, **72-73,** 75, 76, 78, 79, 83, **87, 94-95,** 97
  - Refineries 76, 79, 86
  - Shipping **77,** 79, 86; Tankers 76, 79, 86, 92, restriction on size 92
  - Timber industry 71, 76, **84, 85,** 93
  - U. S. Navy bases 81, **81, 82**
- Pukhtuns *see* Pathans
- Pulitzer, Joseph 753
- Pulpwood: Quebec, Canada 438, 456, **458-459**
- Pushkar Fair, India 228-229; Camel traders **228-229**
- Pushkar Lake, India 229
- Pushtuns *see* Pathans
- Puyallup Indians: Chairwoman of tribe 93
- Pyramids: Egypt 296, 312, **312, 314,** 340, **341**
- Pyrolitic release (PR): Viking missions experiment 23, 24, diagram **15**

Q

- Qattara Depression, Egypt **330-331,** 340
- Qena, Egypt: Pottery **335, 338-339**
- Quadrupeds of North America: Audubon **161,** 167, 168
- Quarter horse: Alabama **485**
- Quartz: Crystal Mountain, Nepal 508, 512
- Quebec (city), Quebec: Archeological excavation **443,** artifacts from **442;** Hotels **442-443,** 446; Lower Town **442-443,** 444; Upper Town 444, 446; Winter Carnival: Ice-canoe race **454-455**
- Quebec (province), Canada 435; ***One Canada—or Two?*** By Peter T. White. Apr., 436-465
  - Capital *see* Quebec (city)
  - Development 449-450, 451, 455, 459, 460
  - Economy 440, 455; Anglophone controlled 438, 441, 444, 461
  - Education 449, 450, 460, 461, 462; Foreigners **447,** 461
  - Elections (1976) 437, 441, 464
  - Eskimos 459, 460, 461
  - Facts and figures 440
  - Festivals 444, **454-455, 462-463;** Religious 450-451
  - Fishing industry **450-451,** 451, 455
  - Flag **440**
  - Foods, traditional 444
  - Government 438; Prime Minister 438, **441,** 456, 459, 464, former 438, 455, 459
  - History 438, 440, 441, 442, 443, 444, 446, 462-463
  - Hunting 444, 448, **452-453**
  - Hydroelectricity 449-450, 456, 459, 460
  - Indians 456, 459, 460
  - Industry 455-456, 462
  - Language, official 438, 441, 446, 460, 461
  - Map 440
  - Natural resources 438, 455-456, **458-459,** 459-461, 462
  - Religions 438, 460, 463; Decline of 450, 463
  - Separatist movement 438, 441, 443, 455, 459, 461, 464
- Quiet Revolution: Quebec, Canada 449, 459
- Quito, Ray 372

R

- "Rabin, Mlle." 149
- Raccoon: Red mangrove habitat **686**

- Races, auto: Watkins Glen, N.Y. 719, 722
- Races, boat: Flatboat **270-271;** Steamboats 269
- Ragweed pollen **290**
- Rails, freshwater king **175**
- Rain forests: Malaysia 635, **636-637,** 643, 651
- Rainier, Mount, Wash. **74,** 83, 85
- Rajasthan (state), India: ***The Pageant of Rajasthan.*** By Raghubir Singh. Feb., 219-243
  - Area 220
  - Camels **228-229, 235, 242-243;** Dealers 220, **228-229**
  - Capital *see* Jaipur
  - Cattle 229, **230-231, 238, 242-243**
  - Climate 219, 243; Monsoons 220, **230-231,** 240
  - Fairs and festivals 220, 228-229, **232, 233**
  - Farms and farming 240, **240-241;** Crops 240, 243, storage **238-239;** Irrigation 222, **242-243**
  - Folk arts **224,** 225, **238-239;** Music 219, 220, 231, musician **218**
  - Forts 220, **226-227**
  - History 220, 222, 226, 233
  - Name origin 220
  - Outlaws **218-219,** 219; Code 219
  - Palaces **222-223, 236**
  - Peoples *see* Bhils; Rajputs
  - Religions: Animism 233; Hinduism 225, 229
  - Villages 220, **230-231**
  - Weddings **236, 237**
- Rajasthan Canal, India **242-243**
- Rajputana *see* Rajasthan
- Rajputs (people) 220, 233; Name meaning 220; Weddings **236, 237**
- Rakhabh Dev, India: Festival, religious **232, 233**
- *Ramayana* (epic) 220
- Ramesses II (pharaoh): Statues **308-309**
- Ramirez, Humberto 42, **45**
- Ramos, Angel **52**
- Ramose (Egyptian) 303; Tomb **302-303**
- Ranchos: Huichols 832, 843, 846, 849
- Rand Afrikaans University, Johannesburg, South Africa **806-807**
- *Rand Daily Mail* (newspaper) 815; Newsroom **806**
- Rangel, Charles 187
- Rankin, John 256; House 254
- Ras Shukheir, Egypt 319
- Rat snake: Red mangrove habitat **687**
- Rationing: Cuba 33, 50, 56, Soviet advisors exempted 39-40
- Rattlesnake: Audubon painting **153**
- Ray, Joe and Delaine, and sons **496**
- Rayonier Quebec, Port-Cartier, Quebec 456
- Re (Egyptian god) 300
- *Red Banks Queen* (flatboat) 157
- Red harvester ant: Electron micrograph **283**
- Red Jacket Park, Penn Yan, N.Y. 716
- Red mangroves: ***The Tree Nobody Liked.*** By Rick Gore. May, 669-689
  - Conservation of 670, 682, 684, 686, 688
  - Detritus 670, 671, 673, 675, 679, 687; Formation 678-679
  - Flowers **676,** 678
  - Food chain support 670, 671, 679, 687, 688
  - Height 678
  - Leaves 670, 671, 678-679
  - Range 670, 675, 677, map 671
  - Roots **668-669,** 670, 675, **675, 677,** 678, 688
  - Seedlings 671, 675, **677,** 678; Development **677,** 678
  - Silt retention 671, 677, 678
  - Wildlife habitats 668, 670, **672-673,** 675, 678, 679, **680-689,** 682, 686, 688
- Red Rooster (restaurant-bar), Harlem 187, **200**
- Redhead duck **176**
- Redthunder, Joe 432, 434
- Reduction: Life process 23, 24
- Redwinged blackbirds **170-171**
- Reforestation: Mindanao, Philippines 385, 386
- Refugees, Tibetan: Nepal 505, 508
- Rehmatullah, Haji 120
- Reims, France: Name origin 588
- Religions *see* Animism; Buddhism; Christianity; Hinduism; Islam; *and* Celts; Egypt, ancient; Huichol Indians
- Remi (Celtic tribe) 588
- Revival meeting: Mobile, Ala. **494-495,** 495, 497-498
- Revolution, Cuban 36-37, 38, 42, 43-44, 46, 56, 69
- Reynolds Aluminum Company: Quebec, Canada 456
- Rheims, France *see* Reims
- Rheumatoid arthritis: Electron micrograph **288**
- Rhine (river), Germany: Headwaters 603
- Rhodesia: Guerrillas 787; Labor pool for South Africa 788, 796; Majority-rule, commitment to 786, 787, 811
- Rhône (river), Europe: Headwaters 603
- *Rhone* (shipwreck) **406-407**
- Ribosomes: Electron micrograph **280**
- Ricard, Gérard **436-437**
- Rice terraces: Luzon, Philippines **362-363**
- Rideout, Wilbert, Jr. 254
- Riebeeck, Jan van 797, 805
- Riffle beetles **566;** Larvae **564, 572,** 577
- Riffle bugs **565;** Aquatic life **569,** 573
- Rigaud, Quebec 443
- Rigaud, Rivière, Canada 443
- Rigs *see* Drilling rigs
- Rimouski, Quebec 450
- Rines, Robert H. 762, 770, 772, 773
- Ripley, Ohio 254
- ***River With a Job to Do—The Ohio.*** By Priit J. Vesilind. Feb., 245-273
- Riverfront Stadium, Cincinnati 258; Vendors **253,** 261
- Rivers and river trips *see* Buffalo National River, Ark.; Ohio River
- Riverside (district), Cincinnati 261
- Rivière-au-Renard, Quebec **450-451**
- Rizal Park, Manila 361
- Rizo, María **66**
- Roatán Island, Honduras: Sponges **392-393, 400-401**
- Roberson, Tom 427
- Roberts, Clifford 267
- Roberval, Quebec: Festival 444
- Robinson, Isaiah 180
- Robinson, Jackie 196
- Robinson, Sugar Ray 196
- Robison, James **494,** 497-498
- Roche Harbor, San Juan Island **94-95**
- "The Rock" *see* Corregidor
- Rockefeller, John D., Jr. 753
- Rockefeller, Nelson A. 753, **753,** 757
- Rockefeller, Mrs. Nelson A. **753**
- Rockland, Maine: Seafoods festival 748
- Rocky Mountain region: Mountain bluebirds 858, 865, **865,** range map 859
- Rodeo, All-Indian: Colville reservation, Wash. **421**
- Rogers, Martin, photographer: ***The Ohio—River With a Job to Do.*** Feb., 245-273
- Romanesque architecture: Mont Saint Michel 823, 826
- Rome, ancient: Celts, wars with 592, 597, 600, 607, 611, 616, 631; Sponges, uses for 405
- Rookery Bay, Fla. 686, 687; Birds **684;** Red mangroves **674,** 684, 688; Sea horse **682**
- Rookery Bay Sanctuary, Fla. 686
- Roosevelt, Franklin D. 737; Squire of Hyde Park 182
- Rope, ancient Egyptian **296**
- Rose, Peter Edward (Pete) 261, 263
- Roseate spoonbills: Florida 684, 687
- Ross, François-Xavier 448
- Ross, Malcolm D. 213
- Rough-winged swallow **175**
- Royal Bank Building, Montreal: Window washers **446-447**
- Royal Institution, Liverpool, England: Audubon exhibit 167
- Royal Natal National Park, South Africa 794
- Rozier, Ferdinand 156, 157-158, 166
- Ruacaná Falls, Angola: Dam 816
- Rubber, natural: Malaysia 635, 640, 643, 653, 656, research 653
- Rubber trees: Malaysia **634-635,** 647, 653, 658
- Ruiz, Luís **66**
- Rumford, Maine: Tourmaline min-

ing 741
Rush Creek, Ark.: "ghost town" near 359
Rutledge, Jeff **491**
Rynne, Etienne 619, 621, 624-625, 626, 627

S

Sabah (state), Malaysia 643, 651; History 638, 640; Oil 651; Secession threats 651
Sabatier, Ilidio 44, 50
Sabbathday Lake, Maine: Shaker community 742, 745, meeting house 742, **744**
Sacda (Ilongot) 373
Sadat, Anwar 317, **324**
Sadat, Jehan **325,** 336
Sadat, Lobna **325**
Safed Koh (mountains), Afghanistan 114, **124-125**
Sage, Bryan 544
Saidu Sharif, Pakistan 130
Sailboats: Keuka Lake, N.Y. **706-707;** Maine **752-753;** Puget Sound, Wash. **72, 73,** 83, **94-95**
Sailplaning: Harris Hill, Elmira, N.Y. 723
Saint-Aubert, Quebec: Snowshoe maker **451**
St. Brigid's Day: Celtic spring 624
St. Clair, Arthur 257
Saint-Eugène, Quebec 443
St. Francisville, La. 165, 166
St. George Serbian Orthodox Church, Midland, Pa. 250
Saint-Jean, Lac, Quebec: Festival 444
St. John River, U. S.-Canada 733
St. Lawrence, Gulf of: Balloon above **209-210, 214,** cover ill.
St. Lawrence River, Canada: Quebec riverfront **442-443**
St. Martin's Day: Irish observance 621
St. Philip's Episcopal Church, Harlem, New York 206
Sainte-Anne, Rivière, Canada: Ice fishing **456-457**
Sainte-Anne-de-la-Pérade, Quebec: Ice fishing **456-457**; Stop sign, bilingual **439**
Ste. Genevieve, Mo. 157, 158
Salamander, two-lined **564**
Saldang, Nepal 508
Salem, Nasr **334**
Salmon: Loch Ness, Scotland 763, 772, 773, **779;** Puget Sound area: Environmental threats 76, 92, fishing **82-83, 88-89,** Indian fishing rights 83, 88, 92-93; Salmon ranch **70,** 92
Salmon River Breaks Primitive Area, Idaho 420
Salt Island, British Virgin Islands: Shipwreck **406-407**
Salt mines: Celts 589; Lansing, N.Y. 722
Saltville, Va.: Mountain man's home near **470-471,** 481, 484
Salzberg, Austria: Celtic mines 589
SAM missile: Egypt **325**
Samhain (Celtic festival) 581, 625
San Andrés Cohamiata, Mexico **834-835,** 846, 852; Dancers **843;** Hut, inside of **848-849**
San Fernando, Philippines: Crucifixion, reenactment of **375**
San Jose, Mexico 836, 840-841
San Juan Island, San Juan Islands, Wash.: Fishermen off **88-89;** Harbors **94-95,** 96; Log house **94**
San Juan Islands, Wash. 86, **90-91;** "Flying Doctor" 96-97; Islands, number of 91, 93, inhabited 16; Population 96; Wildlife 71, 96, 97
San Luis Potosí (state), Mexico: Peyote 836
Sandbars: Red mangrove foundations **668-669,** 675, 678, 679
Sands, Diana 195
Sandy Stream Pond, Maine **740-741**
Santa Clara, Mexico 841, 845
Santiago de Cuba, Cuba 36; Palace of Matrimony **66-67**
Sapsucker Woods, Cornell University 722
Sarawak (state), Malaysia 643, 652; History 638, 640, 652; Oil 652
Saskatchewan (province), Canada: Bluebird trail, world's longest 865; Medicine wheels 144, **145,** 146
Satellite images: Finger Lakes region, N.Y. **710-711;** Nile (river), Egypt **332**
Savannah, N.Y. 712
Savoy Ballroom, Harlem, New York 182
El-Sayad, Abdel Hamid 336
Scanning electron microscopes 274, 278-279; Diagram **281;** Magnification: Graph **280-281;** Micrographs **274-277, 281, 282-290;** Principles 278-279, 281, 286
Scharf, David: Electron microscopy 286
Schistosomiasis: Egypt 337
Schomburg Collection, New York Public Library 187
Schreiber, Barry 808
Schulte's Garden (restaurant), Cincinnati, Ohio 261
Schwicker, Billy 675
Scissy, France: Forest 823, **823**
Scotland: Celts 581, 617, 621; Gas line **530;** Highland games **764;** Oil impact 521, 524, **527, 528-529,** 530-531, **530-531,** 532, **533,** 535, 538, **538;** Unemployment 530-531, 535, 538; *see also* Ness, Loch; Shetland Islands
Scott, Hazel 181
Scott, Sir Peter: Loch Ness monster painting **770-771**
Scottish National Party (SNP) 531-532; Leader **538**
Scriptoria: Ireland **621;** Mont Saint Michel, France **825,** 827
Sculpin, mottled **564, 566, 580**
Sea Dyaks (people) 652, **654-655;** Headhunting 652, 654-655
Sea horses: Red mangrove habitat **682**
Seal Harbor, Maine 753
Seals: Loch Ness, Scotland 762, 767
Sealth (Seattle), Chief: Duwamish Indians 78
Séances: Fox sisters 710
The Search for Life. By Rick Gore. Jan., 9-31
Searsport, Maine: Potato shipment **743**
Seattle, Wash.: Aerial view **74-75;** Industries 76, 78, 79; Market **96-97;** Name origin 78; Residential area **80-81;** Social problems 78-79; Weather 78, 81, snowfall **80-81**
Seed shrimp **567,** 576
Séguin, Robert-Lionel 441, 443
Seine (river), France: Headwaters 589, 619; Name origin 619
Seismometer: Viking missions equipment 17, 25, 28
Sekhar, B. C. 653
Selangor Pewter Co., Malaysia: Workers **666**
Selket (Egyptian goddess): Statue, gold **304**
Selma, Ala. 495
Selma-to-Montgomery march: Alabama 495, 498
Seneca Falls, N.Y. 709, 720-721
Seneca Indians 709
Seneca Lake, N.Y. 708, 712, 716, 719
Sennefer (Egyptian): Tomb **298-299;** Wife 299
Senneville, Father de 827, 829-830
Sensitivity training: Harlem police officers **194-195**
Sept-Îles, Quebec, Canada 455-456; Softball, girls' 456
Sequana (Celtic goddess) 619
Serache, Nat **806**
Serbian Christmas: Midland, Pa. 250, **250**
Sergeant majors (fish): Florida Keys 675
Service station: Keith, Scotland **533**
Seth (Egyptian god) 300
Sethi, Mohammed Ismail 129
Seti I (pharaoh): Tomb **307**
747 jet airliners 83, 86; "Doomsday Machine" 86
Severy, Merle: ***The Celts.*** May, 582-633
Sewall, Bill and Phebe 78
Shadoof: Egyptian irrigation 322
Shah, Hamid 117
Shahur Tangi (pass), Pakistan 136
Shaka (Zulu king) 780
Shakers: Maine 742, **744,** 745
The Shallows *see* La Tène site, Switzerland
Shamans: Huichols 832, 836, **837,** 839, 840, 841, 846, **846-847,** 849, 853; Nepal 500, **501**
Shangsher, Nepal **509,** 510
Shangsher Gompa, Nepal **509,** 510

UM

- Shawneetown, Ill. 270
- Sheep: Maine 752, 757; Pakistan **133;** Shetland Islands 539, 541
- Sheffield, Ala.: Foundry workers **489**
- Sheikh Zayid Bin Sultan City, Egypt 318, **320-321**
- Sheldon, Estel 267
- Sheridan, Philip: Quoted 427
- Sherman, William Tecumseh: Quoted 413
- Shetland Islands, Scotland: Birdlife 539, **541,** 543-544, environmental risks 541, 543, 544; Crofts and crofters 539, **540-541, 544-545;** Fishing 538, 539; Oil impact 529, 538, 539-541, **542,** 543, 544, **544-545;** Weather 539
- Shetland Islands Council **543;** Battle with oil industry 539-540, 543, 544
- Shey (mountain), Nepal *see* Crystal Mountain
- Shields, bronze: Celts **592,** 600
- Shinto priest: Japan **552**
- Ships: Tankers 76, 79, 86, 92, supertanker ports 535, 540, 543; Trawler factory ships 58-59
- Shipwrecks: *Rhone* (steamer) **406-407**
- Shipyard, U.S. Navy: Bremerton, Wash. **81**
- Shoukry, Ibrahim 337, 340
- Shrimp: Mountain streams **567,** 576; Red mangrove habitat 673, **680, 681,** 686-687; Sponge habitats 402, **402-403**
- Shrimp nets: Bay of Mont Saint Michel **828-829**
- Shrines, religious *see* Mont Saint Michel
- Shuenyane, Esline **781,** 789
- Shuhua, Chang: ***The Gentle Yamis of Orchid Island.*** Jan., 98-109
- Sidfa (village), Egypt 322
- Sierra Madre, Luzon, Philippines 372, 378
- Sierra Madre Occidental, Mexico *see* Huichol Indians
- ***Sifting for Life in the Sands of Mars.*** By Rick Gore. Jan., 9-31
- Sigurgeirsson, Thorbjörn 695
- Silos: Bikaner, India **238-239**
- Silver artifacts: Celtic **582-583,** 606, **608, 612-613, 614**
- *Silver Fox* (low-altitude helium balloon): ***The Longest Manned Balloon Flight.*** By Ed Yost. Feb., 208-217
  - Airborne **209, 210, 214-215,** cover ill.
  - Altitudes 208, 212, 215; Diagram **212-213**
  - Assistance, ships and planes 215, **216-217,** 217
  - Ballast 208, 212, 215
  - Cloud effects on buoyancy 215
  - Course 208, 212, 215; Diagram **212-213**
  - Distance 208, 213; Route 212-213
  - Goal 208, 212, 215, 217
  - Gondola, open-air 208, **214, 216,** 217
  - Helium 208, 212, 215
  - Instrument panel **214-215,** 215
  - Launch 208, **208,** 212, 217
  - NGS support 208
  - Recovery at sea **216-217,** 217
  - Safety measures 215, 217
  - Size 208
  - Sun-ray effects 208, 215
  - Team effort 217
  - Time aloft 212, 213, 215
  - Touchdown 212, 213, 217
  - Tracking 215, 217
  - Wind effects 208, 212-213, 215
  - World records, eight 208, 212
- Simone, Nina 195, 196
- Simonet, Nicolas 826, 827
- Sinai, Egypt: Demilitarized zone 319
- Singapore: History 638, 640
- Singh, Karni **223;** Daughter's wedding **236, 237**
- Singh, Man, II, Maharaja (Jaipur) 220
- Singh, Raghubir: ***The Pageant of Rajasthan.*** Feb., 219-243
- Singh, Ranjit 129
- Singh, Sadul, Maharaja (Bikaner) 222
- Sioux Indians 415, 420, 428
- Sitting Bull 415, 428
- Siwa Oasis, Egypt **330-331,** 337
- Skaneateles, N.Y. 709, 724
- Skaneateles Lake, N.Y. **706,** 708, 709
- Skellig Michael (island), Ireland: Stone marker with Latin cross **631**
- Skipmase, Pier 524
- Skrang River, Malaysia 652
- Slim Island, Ohio River: Farm **262-263**
- Slums: Birmingham, Ala. 493; Cairo, Egypt 317; *see also* Harlem
- Smith, Joseph 708
- Smith, Michael L., photographer: ***Song of Hope for the Bluebird.*** June, 855-865
- Smith, Veronica **533**
- Smith, Willie "The Lion" 196
- Smokey Hollow, N.C.: Family **474-475,** 487-488
- Smyth, Robert 524
- Snails: Mountain streams **566, 569;** Parasitic diseases 337
- Snake charmers: India 220
- Snake Creek, Mont. 428
- Snake River, U.S. **412;** Hydroelectric dams 420
- Snakes: Coral snake **160;** Rat snake **687;** Rattlesnake **153**
- Snipe fly: Larva **569**
- Snow lion, flying: Buddhist beliefs 512, 515; Painting of **515**
- Snowmobiles: Quebec, Canada 449, 455, **457**
- Snowshoes 734; Factory 741; Maker **451**
- Soap: Celts 588
- Soaring: Harris Hill, Elmira, N.Y. 723
- Sobukwe, Robert 789
- Soccer: Huichols 845
- Socialism: Egypt 317, 333; Quebec, Canada 463-464
- Soffen, Gerald 12, 25
- Sohag, Egypt: Carpenter **328**
- Solar system: Age 26
- Sonar: Loch Ness monster search 759, 762, 770, 772, 773, 774-775
- ***Song of Hope for the Bluebird.*** By Lawrence Zeleny. June, 855-865
- Sotra (island), Norway **549;** Possible pipeline landfall 547, 549
- Sour-mash whiskey: Distillery 267, **268**
- South Africa, Republic of 725; ***South Africa's Lonely Ordeal.*** By William S. Ellis. June, 780-819
  - Afrikaners 783, **784, 785,** 788, 794, 797, 804, 812-813, 814
  - Agriculture 805, 808; Arable land 786, 808, 811; Crops **810, 811;** Vineyards 785, 805, 808, **811**
  - Apartheid 781, 783, 788, 789, 790; Laws 788, 789, 792, 803, 805; Opposition to 790, 791, 792, 811, 812-813, 814, 818-819
  - Asians 786, **791,** 804
  - Banned people 789, **791,** 813
  - Black labor 782, 787, 788, 789, **794, 796-797,** 801, 808, **810, 811,** 812, **816-817**
  - Blacks: Health care 789, **799,** 800, **805;** Passbooks 789, 792, **803;** Poverty 780, 789, 792, **802-803, 812-813;** Resettlement 792, **800-801,** 815; Unrest *see* Civil disorders, *below*
  - Capitals: Administrative *see* Pretoria; Parliamentary *see* Cape Town
  - Civil disorders 782, 788, 799, 804-805, 811, 815, **816-817,** 818
  - Coloureds 786, 797, **802-803,** 804-805, 808; Resettlement 802
  - Facts and figures 786
  - Flag **786**
  - Foreign relations 786-787, 816; Angola, incursions into 816, **816-817**
  - Gold 786, 794, 796, 806, 819; Coins **796;** Miners **796-797**
  - Government 786, 788; Prime Minister 783, 786, 788, **790,** 813, 814, 818, 819
  - History 782-783, 785, 788, 797, 804, 805; Great Trek 785, 804
  - Homelands policy 781, 786, 787, 790, 800-801, 814-815; Map 787
  - Languages: Afrikaans 783, 785, 788, 799; English 792, 806
  - Map 786-787
  - Parks 794, 796, **808-809**
  - Population 786; Blacks 781, 788; Coloureds 797, 802, 805; Whites 781, 788
  - Tribes 780, 789, 800, 814, 815
  - Wildlife 796, **808-809**
  - Wines 785, 805, 808, 811
- South African Mint: Coins **796**

UMI

South China Sea, Malaysia 649; Storm **648-649**
South Paris, Maine 727
South Waziristan (district), Pakistan 136
South Waziristan Scouts 111, 136
South-West Africa: Independence promised 786, 811; Insurgents 816; South African troops 816
South-West African Peoples Organization (SWAPO) 816
South Woodstock, Maine: Casket maker 741
Southeast (region), U. S.: ***A Walk Across America.*** By Peter Gorton Jenkins. Apr., 466-499
Soweto (township), South Africa 782, 789; Aerial view **798-799;** Crime 782-783; Home **780-781;** Population 799; Strikes 782, 788, 799, 818
Soybean oil 658
Space flights and research *see* Viking missions
Spalding, Don 356
Spanish: Huichols and 843, 845, 849; Philippines 364, 365, 368, 374, 387, 389
Spanish-American War 34, 36, 368
Spanish moss: Alabama: Oak **485**
Sparrows, house: Usurpers of bluebird nesting sites 858, 864, 865
Speakeasies: New York 713
Spear fishing: Orchid Island **98;** Philippines **379**
Spicer, Mr. and Mrs. George 759, 763
Spiritualism: Finger Lakes region, N.Y. 708, 710; Camp **712-713**
Spokane (ferry): Kite flyers **73,** 76, 78
Sponge Exchange, Tarpon Springs, Fla. **405**
Sponges: ***Consider the Sponge.*** Photos by David Doubilet. Mar., 392-407
  Antibiotic qualities 393, 407; Leukemia research 407
  Camouflage 397
  Harvest of **404,** 405
  Industrial use 405
  Physiology 392-393; Canals 392, **399;** Oscula 392-393, **392-393, 395, 396, 398, 402**
  Regeneration 394, 399, 401, 402
  Reproduction 399, 401, **401;** Gender change 401
  Sizes 394, 401
  Species, number of 394
  Symbiosis 397, 402
Sports: Baseball 257, player 261, 263, stadium **253,** 258, 261; Boxing **46-47, 192;** Diving **49;** Football 79, 491; Highland games **764;** Hockey 438, **454-455;** Ice-canoe races **454-455;** Kite flying **73,** 76, 78, **550, 554-555, 558, 559,** 660; Polo 130, 133; *sepak raga* **660;** Soccer 845; Softball 456; Top fighting **660;** Volley ball **853**
Spruce: Maine 731, 734, 753
Squash ceremony (Huichol ritual) **837**
Squirrel Island, Maine: Vacationers **726**
Squirrels: "barking off" 158
Stadthuys (building), Melaka, Malaysia 662
Stanley Cup (hockey trophy) 438, 454
Stanton, Elizabeth Cady 709
Starbird, Don 727, 757
Starbird, Ethel A.: ***New York's Land of Dreamers and Doers.*** May, 702-724; ***A Way of Life Called Maine.*** June, 727-757
Starbird, Glenna 727
Starfish: Brittle star **396**
Stark Brook, Vt.: ***Unseen Life of a Mountain Stream.*** By William H. Amos. Apr., 562-580
Starlings: Usurpers of bluebird nesting sites 854, 858, 864, 865
Starr, Bart **490**
State Office Building, Harlem, New York **183**
State troopers: Alabama **467,** 495
States of Malaya Chamber of Mines: President 657
Statoil (national oil company): Norway 548
Stavanger, Norway: American influence **526-527,** 547; Condeep platforms **523,** 544; Fishermen's blockade 544
Steamboats: *Belle of Louisville* **269;** 19th century 252, 257, 269; Race 269
Steel: Celts 590
Steel industry: Ohio Valley 245, 249, **251**
Steinbeck, John: Quoted 670
Steingrímsson, Páll 694, 699, 701
Stellenbosch, South Africa: Vineyards 785, 808, **811**
Sten gun, copy of **110**
Stephenson, Billy Ray "Wolfcreek Pete" 252, 267
Steuben Glass factory, Corning, N.Y.: Production 724, **724**
Steubenville, Ohio 252, 263
Stevens, Harold A. 187, **197**
Stevenson, Teófilo **46**
Stewart, Alfred "Skip" **244,** 252
Stinson, Florence 713
Stocks: San Andrés Cohamiata, Mexico **834-835**
Stomach lining 289; Electron micrograph **289**
Stone circles: Loch Ness, Scotland 772, **773;** *see also* Medicine wheels
Stone flies **564,** 579; Nymphs **564, 578-579,** 579, 580, cast-off casing **564,** 579
Stop sign, bilingual: Sainte-Anne-de-la-Pérade, Quebec **439**
Stowe, Harriet Beecher 256
Strabo (Greek geographer): Celts 600
Strato-Lab High 5 (balloon) **213**
Stratosphere balloons **212-213**
Streams *see* Brooks
Street, Patricia 716
Strettweg, Austria: Celtic artifact **590-591**
Strickland, Sonny 679, 682
Striking It Rich in the North Sea. By Rick Gore. Apr., 519-549
Striped mullet: Florida 679
Strong, Maine: Toothpick mills 741
Stull, Jack 722
Sturgis, Samuel 428
Subic Bay Naval Base, Luzon, Philippines 391
Submarines, U. S. Navy: Polaris **81;** Trident 81
Submersibles: Oil exploration 524, **536, 537,** 549
Suez, Egypt 318
Suez, Gulf of, Egypt: Oil 317, 319
Suez Canal, Egypt **320-321;** Reopening of 317, 318, 320
Sugar: Cuba 33, 53, **55,** 67; Philippines 365
Sugarcane harvesting: Cuba **54, 55;** South Africa **810**
Sulaimans (mountains), Pakistan 114
Sullivan, John 709
Sullom Voe, Shetland Islands 543; Oil industry 540, 541, **542**
Sully, Thomas 166
Sulu Sea, Philippines 387
Sumburgh Airport, Shetland Islands 539
Summer solstice: Bighorn Medicine Wheel 141, 143, 144, sunrise **140-141;** Moose Mountain Medicine Wheel 146
Summertown, Tenn. *see* The Farm
Sun dance: Cheyenne Indians 140, 141, 144
Sunbeam (boat) 757
Sundown, Jackson 432
Superstitions: Celts 621, 624, 629, 630
Supertanker ports: Scotland 535, Shetland Islands 540, 543
Surajmal (Rajasthani farmer) **241**
Surtsey (volcanic island), Iceland: Eruption 697
Sutherland, Gordon: Trout farm 778
Sutlej River, Asia 242
Sutton, Percy 187, **197**
Suzman, Helen **791**
Svavarsdóttir, Halla 691, 693
Swallows: Rough-winged **175;** Tree 865
"swallows" (Zulu term) 780
SWAPO (South-West African Peoples Organization) 816
Swat (district), Pakistan 129, 130
Swat River, Pakistan 130; Fishing **128**
Swaziland: Independence 787
Sweet potatoes: Orchid Island 104; Philippines 373
Swider, Peter 709
Swings: Rajasthan **230**
Switzerland: Celts 588, 590, 601, 603
Swords: Celts 590, 600, hilt **593;** Yamis **108, 109**

UMI

Sydenham Hospital, Harlem, New York: Demonstration against closing **202-203, 207**
Szabó, Miklós 603, 606

T

T-shirts: Loch Ness monster souvenirs 771, 778
TRW, Inc.: Viking missions equipment **14,** 23
Table Mountain, South Africa **782-783,** 797, 804
Tacitus (Roman historian): Celts 601
Tagalog (language) 364
Tagore, Rabindranath 220
Taillefer (minstrel) 827
Táin Bó Cúalnge (epic) 627
Taiwan *see* Orchid Island
Tala, Egypt 336
Tampa, Fla.: Lightning **870**
Tangmoche, Nepal 500, 507
Tank, Pakistan 136
Tank (military vehicle) **65**
Tankers: Puget Sound area 76, 79, 86, 92, law restricting size 92
Tapestries: Egypt 335
Tardigrade: Electron micrograph **274-275**
Taro root 104
Tarpon Springs, Fla.: Sponges 405, harvest **404,** warehouse **405**
Taruc, Luis ("El Supremo") 384, 385
Tasiujaq, Quebec: Iron mining 461
Tatewarí (Huichol deity) 836, 840, 841
Tattoos: Ibans 652, **653**
Táwéxíkúa (Huichol deity) 840, 849
Teasels 709, 724
Tebat, Sarawak 652
Teifi, River, Wales: Coracle **618**
Telamon, Italy: Romano-Celtic battle **594-596**
Ten Thousand Islands, Fla.: Red mangroves 670, 679
Tenements: Harlem 178, **186,** 195, 204
Tennessee *see* The Farm
"Tent City," Ala. 495
Tents, yak-hair 500, **506**
Tepehuan Indians: Plan Huicot 845, 850
Terrebonne, Quebec: Parade 451
Texana, Murphy, N.C.: Family **474-475,** 487-488
Texans: Norway **518, 526-527,** 547
Thale, Buernica 815
Thebes: Stone carver **311;** Tombs near **298-299, 302-303, 307, 310, 311,** 322
Theresa (hotel), Harlem, New York **183**
Thomas, Bernard **618**
Thórarinsson, Sigurdur 697
Three-Jewel Eunuch 662
Thrushes: Northern water thrush **564**
Thusini, Khathazile 789
Tibet: Refugees from 505, 508
Tidal pond: Vinalhaven, Maine **728-729**
Tiger Fort (Nahargarh), Jaipur, India 220
Tikal (Maya ruin), Guatemala **869,** 870
Timber company, world's largest *see* Weyerhaeuser Company
Timber industry: Philippines 365, 385-386; Puget Sound region 71, 76, **84, 85,** 93; Quebec 438, 456, **458-459**
Tin: Celtic trade 589-590; Malaysia 635, 641, 643, 653, 656, 657, 666; Panning for **667**
Tinkyu, Nepal 508
Tioman (island), Malaysia 649, 651
Tirich Mir (mountain), Pakistan 133
Tito (Ilongot) **379**
To-Ka-Mappo (Nez Perce) **422**
To Live in Harlem.... By Frank Hercules. Feb., 178-207
Tobacco: Canada: Farm **437-438;** Cuba 48, cigar production 48, **53,** curing 48, **52-53,** farms 48, **62-63;** Electron micrograph **284;** Indiana **262,** 263; Kentucky 254, 267
Tombe, Mount, France 823, **823**
Tondo (district), Manila: Squatter settlements 367
Toohoolhoolzote (Nez Perce) 420, 428
Toothpick mills: Strong, Maine 741
Topdek (Ilongot) **378**
Tops: Longest spin 660; Top fighting **660**
Tornado: North Carolina 488
Torques: Celts 600, **608**
Tourmaline mining: Maine 741-742
Towboats: Ohio River 248 *see also Northern*
Toyota: Assembly plant worker **368**
Toys: Loch Ness monster toys **765**
Trachong (Nepalese) **507**
Tracy, Cathy **749**
Trade embargo: U.S. against Cuba 37, 46, 52
Tragyam Gompa, Nepal 512
Train: Augusta, Ky. **256**
Trans World Airlines: Balloon assistance 217
Transatlantic balloon flight attempt *see Silver Fox*
Transkei: Family **812-813;** Independence 787, 814; Prime Minister 815
Transmission electron microscopes: Diagram **280;** Magnification: Graph **280-281;** Micrographs **280, 288-289;** Principles 278, 280
Trappers: Maine 731, **733**
Trawler factory ships 58-59
The Tree Nobody Liked (red mangrove). By Rick Gore. May, 669-689
Tree-sitting contestant **702**
Trees: Annual rings **85;** Forestry methods **85;** Logging **84,** clear-cutting 93; Seedlings 93, greenhouse-grown **85**
Trek to Nepal's Sacred Crystal Mountain. By Joel F. Ziskin. Apr., 500-517
Treveri (Celtic tribe) 600
Trident submarines 81
Trier, France 600
Trinity Parish, Harlem, New York: Cemetery 168
Triplefin fish **403**
Trishaws: Malaysia 662, 666
Tristan: Celtic legend 588
Trout: Brook trout **566,** 573, 579-580
Truck stops: Wheeling, W. Va. 252
Trucks: Fire truck, antique **121;** Japanese minitruck imports **77**
Trudeau, Pierre Elliott 435, 441, 444, 464
Trumpeter: Kentucky girl **257**
Tsering the Painter 510, 512, 517; Painting by **515**
Tsewang, Tulku 512, 516-517, **517**
Tuba (palm wine) 385
Tube sponges **406-407**
Tuekakas (Nez Perce) 415, 418; Quoted 413
Tun Datu Haji Mustapha bin Datu Harun 651
Turbellarians 679, **679**
Turkey: Opium poppy field **868-869**
Turkeys, wild 158, 166, **169**
Tutankhamun (pharaoh) 305, **305,** cover ill.; Funerary objects **304-306,** cover ill.
Tuxpan de Bolaños, Mexico 849, 852; Airplane **852-853**
Twain, Mark: Quoted 239, 269
Twelve Apostles mountains, South Africa 805
Twin Altars, Chapel of the, Mont Saint Michel 823, 826
Two-lined salamander **564**
Typhoons: Orchid Island 107

U

Udaipur, India: Farm near **240-241**
Uderzo, Albert **632**
Uffington, England: Effigy, horse **584-585**
Uncle Tom's Cabin (Stowe) 256
Underground Railroad: Ohio 256
Ungava Bay, Quebec 460
Union Mechling Corporation 245
Union of Soviet Socialist Republics: Cuba, involvement in 1, 33, 38-39, 40, 42, 53, 58, 59, 61; Egypt, relations with 317, 318, 319, 322, 325, 336; Mars landings 10
Unions: Cuba 32, **32-33**
Uniontown, Ky. 266, 267
United Nations: South Africa, resolutions against 819
United Society of Believers in Christ's Second Appearing *see* Shakers
United States: Bluebird preserva-

UMI

tion 855, 864, 865, trails 858, 864, 865; Cuba, relations with 1, 32, 34, 36, 37, 46, 52, 65, 67, 69; Egypt, relations with 318, 319, 325, 337; ***Heartland Shaped by an Icy Plow*** (Illinois, Indiana, Ohio, and Kentucky). Feb. supplement; Mars landings *see* Viking missions; Philippines, occupation of 364, 365, 368; ***A Walk Across America.*** By Peter Gorton Jenkins. Apr., 466-499; *see also* Ohio River and Basin
U. S. Army Corps of Engineers: Buffalo River, Ark. 351; Ohio River 266, 267; Red mangrove conservation 670, 682, 686
U. S. Coast Guard: Puget Sound: Pollution-control flights 82-83, ship trackers **76**
U. S. Congress: First national river created 345, 351, 356
U. S. Naval Medical Research Unit: Bilharzia research 337
U. S. Navy: Puget Sound bases 81, **81,** 82
U. S. Route 1: Maine 737, 748, 751, 752
University of Chicago, Ill.: Electron microscope research 278, 279
University of Colorado, Boulder: Electron microscope 278
University of Iceland, Reykjavík: Volcanologist 697
University of Miami, Fla.: Red mangrove research 670, 678-679
Unseen Life of a Mountain Stream. By William H. Amos. Apr., 562-580
Unst (island), Shetland Islands: Seabird colonies 543-544
Up-Helly-Aa (festival): Shetland Islands 539
Uranium atoms, movie of 278
Urban redevelopment: Ohio River 245, 258-259, 261, 267, **269,** 270
Urnfield people 588
Urquhart Bay, Loch Ness, Scotland 763, 773; Diagram **762;** Divers **758, 774-776;** Garbage **776-777**
Urquhart Castle, Scotland **758, 759, 769,** 773
Utopia Planitia, Mars: Space photo **5;** Viking 2 landing site **4-5,** 5, 13, 25

V

Valdés, Armando 36
Valdés, Eva María 43
Valeriano 853
Valles Marineris (canyon system), Mars 9, **28-29;** Diagram **28**
"Valley of 10,000 Hay Stacks" 427
Vallières, Pierre 464
Vancouver, George 72, 78
Vanderbilt, George W. 753
Van Der Zee, James **181;** Photographs by **180-181**
Veiga, Roberto 32
Velvety tree ant: Electron micrograph **283**
Vendors: Riverfront Stadium, Cincinnati **253,** 261
Veneer mill: Murphy, N.C. **476,** 487
Venus (planet), rising **142**
Vercingetorix (Celt) 607, 611, 616
Vergil: Quoted 606
Vermont *see* Stark Brook
Verrett, Red **518**
Vesilind, Priit J. **253; *The Ohio—River With a Job to Do.*** Feb., 245-273
Vestmannaeyjar (village), Heimaey, Iceland: ***Vestmannaeyjar: Up From the Ashes.*** By Noel Grove. May, 690-701
  Artists, variety of 698
  Ash removal **690-691,** 691, 693, 694, 695, 696, 697
  Cliff cleaners above **690,** 691
  Evacuation (1973) 693, 698
  Festival, three-day summer 698-699
  Fishing 693, 694, 695
  Harbor 691, **694-695;** Lava threat 694-695; Saved and improved 694, 695
  Houses and fish-processing plant lost 695
  Lava-heat, use of 695, 697
  Musicians 698, 699, 701
  People, attitude of 691, 693, 694, 697, 698-699
  Population 698
  Reconstruction 693, 695, 697
  Rescue workers 695, 698
  Restoration of soil and vegetation **690-691,** 691, 693, **693,** 695, 697, **700,** 701, **701**
  Return of villagers 693, 695, 698
  Tourists on lava field **698-699**
  Volcano *see* Eldfell, *outlined*
Vevay, Indiana: Farming near **262,** 263
Vibert, Andrew 446
Vibert, Clarence 446
Vibert, Normand 446
Vibert, Peter 446
Vickers Oceanics L-1 (submersible) **536, 537**
Victory Fort (Jaigarh), Jaipur, India 220; Treasure vault, legendary 220
Vigneault, Gilles 438, **448,** 451, 464
Viking missions: ***Mars: Our First Close Look.*** Jan., 3-31
  I—***As Viking Sees It.*** 3-7
  II—***The Search for Life.*** By Rick Gore. 9-31
  Computers 7, 13, 24, 25
  Cost 10
  Descents 10, 25, diagram **13**
  Distance traveled 5, 9
  Equipment **14,** 16, 17, 23, 24, 25, 28; Cameras 5, 7, 9, 17; Diagrams **15-16;** Sampling arm **8, 17, 18-19,** 24
  Landers 10, **13,** 26; Diagram **17;** Foot pads 10-11, **20;** Replicas **17,** 24
  Landings: Dates 5, 10, 25; Sites **2-3, 4-5,** 5, 8, 9, 10, **14-16, 17-19,** 25, map locating 13
  Life, tests for 8, 14, 18-19, 23, 24-25; Diagrams **15-16**
  Orbiters **13,** 17, 25, 27
  Radio delay 10, 13
  Scientists **4, 6-7,** 8, 9, 10, 11, 12, **14,** 15, 19, 20, 22, 23, 24, 25, 26, 27, 28, 31
Viking Piper ("lay barge") 524
Vikings: Ireland 619, 627, 630
A Village Rises From Ashes (Vestmannaeyjar, Iceland). By Noel Grove. May, 690-701
Viñales Valley, Cuba **62-63**
Vinalhaven, Maine **728-729**
Vindelici (Celtic tribe) 601
Vineyards: New York **714-715;** South Africa 785, 805, 808, **811**
Violins: Huichols **842, 843**
Virgin Gorda (island), British Virgin Islands: Sponges **394**
Virginia: Leaf specimens **478, 479;** Mountain man **470-471,** 481, 484; Walker's tour of 476-477, 480-481
Viruses: Electron microscope studies 279, 284, 288-289, **288-289;** Size 279
Visayan Islands, Philippines 384, 387
Visayan Sea 384
Voe, Shetland Islands: Oil impact 543
Volcanoes: Iceland 693, 694, 697 *see also* Eldfell; Mars 9, **28-29**
Volleyball: Huichols **853**
Von Engeln, O. D. 704
Vorster, Balthazar John 783, 786, 788, **790,** 813, 814, 818, 819
Vranes, Sylvester "Sonny" 250

W

Wadi El Gedid, Egypt *see* New Valley
Waggoners Gap, Pa. 470
Wagner, Rüdiger 340
Wagon, ceremonial: Celtic grave 589, 606
Wake: Inishmaan, Aran Islands 630
Waldoboro, Maine: Folklore academy 751
Wales: Celts 581, 601, 617
Walis (potentates) 129, 130
A Walk Across America. By Peter Gorton Jenkins. Apr., 466-499
Walker, Madrue "Lanier" **485**
Wall carvings: Orchid Island **106-107**
Wallace, George 493, 495
Wallowa County, Oreg. 415
Wallowa Valley, Oreg. 413, 415, 418, 430; Nez Perce band 413, 414, 415, 418, 420
Walls, Roy **272,** 273
Walpole, Maine 748
Walsh, Peter 524
Walvis Bay, South-West Africa 786

Wana, Pakistan 136
Warbler, parula **177**
Ward, Fred 1, **69;** ***Inside Cuba Today.*** Jan., 32-69
Washington, Dinah 189
Washington (state): ***Chief Joseph.*** By William Albert Allard. Mar., 409-434; Fishing vessel auction **88;** Indian fishing rights 83, 88, 92-93; *see also* Puget Sound
Washington, D. C. 476
Wassef, Ramses Wissa 335
Water bear: Electron micrograph **274-275**
Water buffaloes: Malaysia **644-645**
Water jugs: Egypt **335, 338-339**
Water lily, Ice Age: Pollen **290**
Water mite **568, 569**
Water moss **563, 566, 569,** 573, 576
Water penny **566;** Larvae **564, 572,** 577
Water pollution: Ohio River 245, 248, 263; Puget Sound area 82-83
Water strider (bug) **565**
Water thrush, northern **564**
Watermelons: Truckload **482**
Waterton, Charles 167
Watkins Glen, N. Y. 719, 722
Watson, George E. 865
Watson, James L. 187
Watts, Frederick 187
A Way of Life Called Maine. By Ethel A. Starbird. June, 727-757
Waziristan (region), Pakistan 117, **118-119;** *see also* North Waziristan; South Waziristan
Wazirs (tribe): Pakistan 136
Weaver, Kenneth F.: ***Electronic Voyage Through an Invisible World.*** Feb., 274-290
Weaving: Egyptian children **335;** Huichol woman **844**
Webster, Daniel 176
Weddings: Cuba 41, **66-67;** Rajputs **236, 237**
Welders: North Sea oil fields **518,** 535
Wells, H. G. 12
Wells, holy: Celts 619, 621, 624
West End High School, Birmingham, Ala. 491
West Indies *see* Cuba
West Virginia: Camping 477, 480; Ohio River area 252, 253
Western bluebird 858, 865, **865;** Range map 859
Westmann Islands, Iceland *see* Heimaey
Weston, M. Moran 206
Weyerhaeuser Company 71, 93; Logging operations **84,** 93
Wheat fields: Pakistan **137;** Washington **424-425**
Wheeling, W. Va. 252
Whiskey, Kentucky bourbon: Distillery 267, **268**
White, Peter T. 435; ***One Canada—or Two?*** Apr., 436-465
White Bird (Nez Perce leader) 415, 420, 428
White Bird Canyon, Idaho: Battle 423
White Bird Creek, Idaho 423
White ibises: Red mangrove habitat 678, **684**
White River, Ark. **345;** Maps 350, 351
Whittaker, Jim 71, 97
Whooping crane **172-173**
Widmer, Will 719
Wildlife: North America: ***Audubon "On the Wing."*** By David Jeffery. Feb., 149-177
Wiles, Libby **706**
Wilkinson, Jemima 708
William the Conqueror 827
William Smith College, Geneva, N.Y.: Student **717**
Williams, Elijah **426,** 434; Granddaughter **426**
Williams, Malcolm 524
Williams, Wesley **197**
Wilson, Alexander 156-157, 166
Wilson, Aubrey 524
Wilson, R. Kenneth 763
Wilson, Woodrow "Woody" 267
Wilton, Maine: Leather industry **737**
The Wind in the Willows (Grahame) 8
Window washers: Montreal, Quebec **446-447**
Wine production: New York 708, 718, 719, vineyards **714-715**
Winkler, Annie **476**
Winkler, Bart **477**
Winkler, Oscar "Preacher" **477**
Wírikúta (Huichols' sacred desert) 832, 836, **838-839,** 852
Wiscasset, Maine 748
Wisdom, Mont. 427
Wisner, Frances Zaunmiller 420, 423
Witwatersrand Reef, South Africa: Gold 796, 806
Wolf Creek, Ky. 252, 267
Wolf Creek Wilderness survival school, Ga. 488
Wolfe, William **538**
Wolff, Frank 71, 97
Women's Defense of the Constitution (South Africa) 792
Women's rights: Celts 588, 589, 601, 614; Egypt 325, 336; New York activists 708, 709, 716, 720-721
Wong, Ivan C. H. 658
Woodpeckers, ivory bill: Audubon painting **162**
Woodson, LeRoy, Jr. 147; photographer: ***To Live in Harlem....*** Feb., 178-207
World (newspaper): Reporters jailed 818
World Bank: India, loans to 243; Philippines, aid to 367, 369
World Community of Islam in the West: Members **190-191**
World records: Balloon flights 147, 208, 212, 213
World War II: Malaysia 637, 651; Philippines 361, 380, 381
Wyman, J. Hollis 740-741
Wyoming *see* Bighorn Medicine Wheel

X

Xenon: Martian atmosphere 26
Xhosa (language): South Africa 789, 814

Y

Yabut, Nemesio I. 364
Yahya Petra (King of Malaysia) 638, 643
Yaks: Nepal 500, 506, 507
Yamis (people): ***The Gentle Yamis of Orchid Island.*** A picture story by Chang Shuhua. Jan., 98-109
  Canoes **98-99**
  Character 107
  Children **100,** 101, 104; Mortality rate 104
  Civilization, attitude towards 99, 103, 104, 107
  Disputes, settlement of 99, 108
  Dress: Ceremonial **103, 104-105;** Helmets **108, 109;** Modern 104
  Festivals **104-105**
  Fishing **98,** 99, **100**
  Food **101,** 104; Preparation of **105**
  Foreign rule 99, 103, 107
  History 108
  Houses, underground **106-107;** Diagram **107**
  Island: Aerial view **102-103;** Map, locating 103
  Language 104
  Marriage 104
  Origin of, legendary 99
  Population 104
  Schools 103
  Superstition 101
  Women 101, **103,** 104, **104-105, 107**
Yang di-Pertuan Agong (title) 638, 643
Yarn paintings: Huichols **845,** 853, cover ill.
Yates County Kitchen Band: New York 716
Yawl **752-753**
"Ye Amphibious Ancients Bathing Association" (swimming club) 778
Yellow Bull (Nez Perce) **419,** 427
Yellow Wolf (Nez Perce) 415; Quoted 426, 428, 430
Yellowstone National Park, U. S. 427; Establishment of 427; Tourists 428
Yokel, Bernie 686-687, 688
Yost, Ed **208, 214, 216;** ***The Longest Manned Balloon Flight.*** Feb., 208-217
Young, Brigham 708
Young, Tom 26
Yung Lo (Emperor of China) 662
Yusufzais (tribe): Pakistan 130
Yuty (crater), Mars **27**

Z

Zambia: President 787; South Africa, relations with 786, 787
Zamboanga, Philippines 387, 391
Zanempilo Health Centre, King William's Town, South Africa **805**
Zayid, Sheikh (Abu Dhabi) 318, 320
Zeb, Miangul Jahan 130
Zeleny, Lawrence **859**; ***Song of Hope for the Bluebird.*** June, 855-865
Zille, Helen **806**
Zimmerman, Ronald: Farm **262-263**
Zinc mining: Arkansas (1920's) 351, 359
Ziskin, Joel F.: ***Trek to Nepal's Sacred Crystal Mountain.*** Apr., 500-517
Zobel, Jaime 364, 368
Zóphoníasson, Páll 695, 697
Zululand, South Africa 789
Zulus (tribe) 780, 782, 788, 789, 815; Chief minister 801, 815; History 804; Resettlement **801,** 815; Sports show **818-819**

INDEXING STAFF

JOLENE M. BLOZIS *Chief*
MARTHA K. HIGHTOWER *Assistant Chief*
GEORGE I. BURNESTON
BARBARA L. KLEIN
ANNE K. McCAIN
BRIT A. PETERSON
JESSICA C. TAYLOR
VIRGINIA S. THOMPSON